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THREE MONTHS IN THE UNITED STATES AND CANADA.

BY THE EDITOR OF THE "WESTERN GAZETTE."

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PREFACE.

The following series of papers appeared in "The Western Gazette" and "Pulman's Weekly News," at somewhat irregular intervals, between November 1883 and September 1885. They are here reprinted from the newspaper type, made up in book form. The subject with which they deal has of late years become such a hackneyed one that the book market has been literally flooded with works on American travel; and although the author of these sketches claims to have dealt with his subject in a somewhat novel and unconventional manner, he does not feel justified in incurring the risk of republishing the work in larger type and more convenient form, and thus adding one more volume to the rapidly accumulating mass of similar literature. What he has done has been simply to print a few hundreds of copies from the newspaper type before it was broken up, so that any of those who read the sketches as they appeared may, if they so wish, procure a copy of them in a form convenient for preservation.

It is hardly necessary to add that the articles, as thus reprinted, retain a good many errors and faults of arrangement which would have been carefully corrected on revision, if the work had been re-set in book type and arranged in book fashion. Among the errors which those who know America are pretty sure to detect is the substitution of "Mississippi" for "Missouri" in several of the earlier chapters. These two great rivers, whose names are somewhat alike, which run nearly parallel to each other for hundreds of miles, and finally unite to form one grand stream, are easily confounded even by those who have a fair superficial knowledge of the geography of the States. It is the Missouri (which is really the larger stream of the two), and not the Mississippi, which forms the most distinctive dividing line between East and West; and whenever the latter is spoken of as the starting-point for the Far West, it is the Missouri which is meant. Omaha and Kansas City are on the Missouri. St. Louis is on the Mississippi, just below the point at which the Missouri joins it. The papers, no doubt, contain other errors, but this is the only one of importance which the writer has detected.

Yeoril, January, 1886.

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THREE MONTHS IN THE UNITED STATES AND CANADA.

WHY I WENT.

I WAS not very well in health. As nearly as I can calculate, I was about 25 per cent. below par. With regard to the remaining 75 per cent. of me—the balance of my personality, so to speak,—medical friends and advisers (two or three of them) said: “Why don’t you take three or four months’ rest, and go to America?” And I said to myself, “Why not?” I said to myself, further, “What an extraordinary circumstance, now, that two or three doctors should agree in saying precisely the same thing! We hear a great deal more about doctors’ differences than about their agreements; and when several of them *do* chance to agree, their unanimity deserves our fullest consideration.” So I fully considered the unanimity in this particular case, and gave it all due weight.

I may add, moreover, that the doctors’ advice entirely “jumped with my humour,” as I fancy somebody somewhere says. The prescribed medicine was, indeed, not at all unpalatable.

A visit to the States had been one of the most cherished dreams of my life. From my boyhood upward, I had watched with intensest interest the marvellous growth of that “Greater Britain” which vigorous swarms from the overcrowded hives of Europe were building up beyond the Atlantic. In imagination, I had seen the advancing hosts press steadily forward towards the setting sun—through primeval forests, across prairies that appeared limitless, over rivers beside which those of Europe are but brooks, athwart deserts as dry and as sterile as Sahara, across mountain ranges as lofty and as rugged as the Alps. I had seen the European invaders settle down in vast swarms—here beside a mighty inland fresh-water sea, there at the junction of two vast rivers, yonder amid the abounding mineral wealth of a great mountain chain, and, furthest of all, around a superb land-locked harbour in which all the trade of the greatest of oceans may find safe and ample accommodation. And whether these swarms called the spots on which they alighted by the name of Chicago or Milwaukee, St. Louis or Cincinnati, Denver or San Francisco, I saw that they had laid the foundations of great cities which immediately began to teem with life, and which in a very brief period became the centres of enormous trade and of apparently boundless prosperity. I saw, moreover, that these great cities owed their amazing prosperity to the fact that one-half of the European swarm had scattered itself far and wide over the prairies and among the forests and the mountains, and had set to work in right good earnest to extract from the fertile soil and the rich mineral deposits the great harvest of

wealth which Nature had, through untold ages, been waiting to bestow. And I saw, and fancied I saw, in all this a new hope for the human race. For, after making all due allowance for the evils attendant on a new civilization—the lawlessness, the recklessness of speculation, the neglect of sanitary laws, the political corruption, the desperate race after wealth, the general want of the social ballast which steadies older communities—I could not fail to see that this growing community was one in which the producer of wealth enjoyed unusual opportunities of retaining for himself a fair share of the fruits of his labour. I saw that, as a set-off against the evils inseparable from the pioneer work of civilization, America enjoyed perfect immunity from many of the evils that afflict Europe—from over-population, rival royal dynasties, feudal institutions, privileged classes, hereditary despotisms, state-favoured creeds, and the race hatreds and international jealousies of half-a-dozen great empires, involving the maintenance of vast standing armies which drain out the very life-blood of the people. I saw, too, that the founders of the great Republic had, with wise prescience, made provision for the education of the whole people, and in this I discerned a ray of hope brighter than any which could emanate from mere material prosperity, however great.

Man and his doings in the States had thus got a firm hold of my imagination; but the physical features of the North American Continent exerted over my mind an equally powerful influence. Niagara had, from childhood, been to me the noblest type and fullest expression of earthly beauty and grandeur. The vast chain of lakes which separate Canada from the States, and the noble river through which their surplus water is carried to the sea, were to me an ideal, as they are a unique, system of natural waterworks. Of late years, the long-hidden beauties of the Rocky and Sierra Nevada Mountains have been brought to light, mainly through the boldness and enterprise of railway companies and engineers, whose works are hardly less wonderful than the gorges they traverse and the summits they scale. Of all this, also, I had duly taken account. I was, in short, in capital condition for the doctors’ prescription—a three months’ dose of America.

I took the dose, in the company of a gentleman well-known in the neighbourhood of Yeovil, who had been similarly prescribed for; and I propose to tell, in a series of articles, what the medicine was like and how I relished it.

GLOBE-TROTTERS.

We English are very apt to poke fun (I have done it myself before now) at the American globe-trotter. This

personage—lady or gentleman, for he ; no, it cannot be "he;" let us say "it,"—is of both sexes. Now, where am I? I have lost the "thread of my discourse." Let us hark back and try again. This personage, then, (the American globe-trotter) "does" Europe in about a fortnight. That is to say, he rushes about to a score or so of great cities, famous cathedrals, and world-renowned birth places, allowing himself for each place as much time as elapses between the arrival of one train and the departure of the next. It was this class which Mr. Du Maurier satirized so splendidly in *Punch* a few months ago. The scene is a Continental table d'hôte. A gentleman, doing the civil to a stout, over-dressed, "personally-conducted" lady sitting beside him, asks: "And where, madam, do you go to to-morrow?" "To Milan," she replies. "Excuse me, madam," says the gentleman; "but you are in Milan now." "Oh, are we?" asks the lady; "in that case, it is Venice to-morrow." This conversation (which I have repeated as nearly as I can remember it) scarcely exaggerates the blindness and the want of appreciation with which many Americans (yes, and plenty of English people too) rush about the Continent at the tail of a "conductor."

Now, I am in mortal fear lest any of these globe-trotters should read my little narrative, realise how much ground I managed to cover in the limited time at my disposal, and shout at the top of their voices, "You're another!" If they are rude enough to do this, what am I to say? I am afraid I can only ask, in reply, to be judged by results. The great traveller Humboldt once read some other traveller's book, and, on laying it down, he remarked of the author that he never knew a man who had travelled further and seen less. I have certainly rushed about a good deal, but I *seem* also to have seen a good deal. That, of course, may be a delusion of mine. If it is, my readers, if I am fortunate enough to find any, will very soon wake up to the fact. My real defence for imitating the globe-trotter a little too closely is simply this—that, unless one can be sure of visiting America a second and a third time, it is, on the whole, better to get a general, if hasty, view of the whole country, than to gain a minute knowledge of a single state or district.

MY SKELETON ROUTE.

Before proceeding to deal with the details of my journey—to describe what I did, and saw, and heard at each separate stage, I will first give a brief description of my route. My readers (always supposing I have any) will then know in what order to expect the details, as they (the details, not the readers) will afterwards follow in the order indicated in the subjoined itinerary:—

	English Miles.
July 3.—Travelled from Yeovil to (Croydon) London	133
" 4.—Croydon to Liverpool	211
" 5 to 13.—Liverpool to Quebec per Allan Line steamer <i>Parisian</i>	3,029
" 16—17.—Night boat from Quebec to Montreal	180
" 19.—Montreal to Dickinson's Landing, by rail, and back by boat down the St. Lawrence Rapids to Montreal	160
" 20.—Montreal to Ottawa by rail, and thence to Brockville by rail	195
" 21.—Brockville to Toronto by boat, through the Thousand Islands and Lake Ontario	210
" 24.—Toronto to Niagara, by boat and rail	45
" 25.—Niagara (Canadian side) to Buffalo by rail	26
" 26—27.—Buffalo to Cleveland by night train	173
" 27.—Cleveland to Detroit, rail	150
" 28.—Detroit to Cass City, Michigan	116

Aug. 4.—Cass City to Detroit	116
" 4—5.—Detroit to Chicago, night train	285
" 9.—Chicago to Milwaukee	85
" 10.—Milwaukee to Menomonee on Lake Michigan	180
" 11.—Menomonee to Marquette (Lake Superior)	137
" 12—13.—Marquette to Duluth (Lake Superior) by boat	300
" 14.—Duluth to St. Paul (Minnesota)	156
" 15.—St. Paul to Minneapolis and return	46
" 16.—St. Paul to Sioux City (Iowa)	270
" 17.—Sioux City to Omaha	100
" 17—18.—Omaha to Denver	569
" 21.—Denver to Black Hawk and Central City and return	80
" 22.—Denver to Leadville	171
" 23.—Leadville to Denver	171
" 25—26.—Denver to Salt Lake City	649
" 28—29.—Salt Lake City to San Francisco	932
Sept. 3—5.—San Francisco to Salt Lake City	932
" 5—6.—Salt Lake City to Pueblo	614
" 6—7.—Pueblo to Chama (New Mexico)	223
" 7—8.—Chama to Denver	343
" 9—10.—Denver to Kansas City	639
" 10—11.—Kansas City to St. Louis	323
" 13.—St. Louis to Cincinnati	340
" 14.—Cincinnati to Richmond (Indiana)	70
" 15.—Richmond to Cincinnati	70
" 15—16.—Cincinnati to Washington	553
" 18.—Washington to Baltimore	40
" 20.—Baltimore to Philadelphia	98
" 22.—Philadelphia to New York	90
" 28.—New York to Boston	233
" 29.—Boston to Lewiston (Maine)	140
Oct. 1.—Lewiston to Boston	140
" 4.—Boston to Johnstown	250
" 5.—Johnstown to Albany	50
" 6.—Albany to New York by boat on Hudson River	145
" 14 to 21.—New York to Liverpool by White Star steamer <i>Germanic</i>	2,576
" 23.—Liverpool to Croydon	211
" 24.—Croydon to Yeovil	133
Total	18,058

Where I have not otherwise described the mode of travelling it is to be understood that the journeys were made by rail.

It will be seen that I have accounted in this list for those journeys only which were made by sea, on the lakes or rivers, or by rail between the various cities. The numerous short journeys within or around the various cities are not included. These, on a moderate estimate, would bring the total distance travelled up to 18,500 miles, or about three-fourths of the circumference of the Earth.

"And do you call that *rest*?" somebody asks. Well, honestly, I do not know that I can. Suppose we call it *change* instead. Change is good, even if it is only a change from one form of effort to another. The bicyclist who has wearied one set of muscles in a long run finds it a grateful relief to rest that particular set, and to call another set into play, by pushing his machine up a hill. The professional man whose brain is working incessantly during the greater part of the year renews his flagging energies by substituting a few weeks of hard work, in the shape of "sport" or mountaineering, for the monotonous grind of the office or the study. Some men even find recreation and benefit in following their usual occupation under new conditions. A London lawyer is said to have spent his holidays, to the benefit of his health, by going down into the country and lending a hand to a legal friend. At first sight, his idea of a holiday and a rest appears odd enough; but it must be remembered

that, though the work he did for his friend was like his own in kind, the circumstances in which he did it were different. He was, of course, in a different atmosphere, and amid different surroundings, from those at home; and, what was equally important, the sense of responsibility under which his work for his own clients would be done, was no longer felt when he was co-operating with his friend. Everybody, I suppose, has heard of the famous mill-horse which, when it wanted a "change," simply turned round and walked in the opposite direction to that in which it had been going. (N.B. This is not a bad story, but the first teller thereof forgot to explain what kind of mill the philosophical beast worked in, that he was able to reverse the motion of the machinery without causing a general smash-up of things.)

WHY I ADOPTED THE ABOVE ROUTE.

Most of the visitors to America both go to and return from New York. As no doubt some curious person or other will want to know why I was eccentric enough to do otherwise, I may perhaps as well explain at the outset the considerations which determined my route. In the first place, I wanted to avoid crossing the Atlantic earlier than May or later than October. In such steamers as are now running, the passage may be made safely enough all the year round; but though a winter voyage may be fairly safe, there is no great amount of pleasure to be got out of it. As I was confined (or rather confined myself) to the period between May and October, it was impossible to avoid spending the hottest part of the summer in America, and the worst places to be in during the excessive heats are the great central and eastern cities. Again, I wanted to see the approach to Canada by the St. Lawrence Gulf and River. Accordingly so arranged my journey as to go out by the St. Lawrence route (the more northerly) and to return by the New York route. During the hottest part of the summer (mid-July to mid-Sept.) I was in Canada, on the St. Lawrence and the great lakes, in Michigan, Minnesota, and other northern States, among the Rocky Mountains, and on the Californian coast. By the time I reached St. Louis and Cincinnati (terribly hot places in the summer), the great heats had passed. The summer was, on the whole, a very favourable one for stranger tourists. Everybody agreed in saying that it was an unusually cool season, and I am bound to testify that I suffered from heat a great deal less than I expected. I trust I have now satisfied all legitimate curiosity on this point.

GETTING OFF.

"Why doesn't she move?" The "she" in question was the Allan liner *Parisian*. The speaker was one of the 124 persons who were sitting in her saloon at dinner at half-past six on the evening of Thursday, July 5th. The continued stay of the big ship in the middle of the Mersey, opposite the Landing Stage, was, indeed, a matter of surprise to all of us. We had been on board nearly two hours. The tug which carried us out had long ago returned to the Landing Stage, taking back with it the friends who had come so far to see us off. We had dried our eyes—and our pocket-handkerchiefs, and had almost finished our first meal at the well-furnished board of Messrs. Allan Bros. As I sat looking out of one of the open windows at the Cheshire shore, the spire of a Birkenhead church stood up in the centre of

one of the "bull's-eyes," like a picture in a small circular frame. It was not until we had about reached the last course of the dinner, that I noticed that this spire had begun to move very slowly from the centre of its frame, and in a few minutes it was invisible. A few minutes more elapsed, and I found the church again in a frame—this time in a different one. Either the church or the ship was clearly on the move; and as churches are not, so far as my experience goes, accustomed to walk about, I presently arrived at the inevitable conclusion that the *Parisian* was turning round. But the turning of a ship 150 yards in length, in a river like the Mersey, is a tedious process, and in our case the turning tide was left to do the work in its own leisurely way. The motion of the huge ship as she swung round was so slow as to be almost imperceptible, and the evening was well advanced before the giant engines were called upon to commence their eight days' task.

TIDES AND POST-OFFICE REGULATIONS.

It may seem strange to the uninitiated that a great mail steamer should set out on an Atlantic voyage in this exceedingly deliberate fashion, especially in these days, when the great steamship companies are straining every nerve to reduce the length of the passage to the shortest possible number of minutes. But there are many things in heaven and earth (and on the sea) that are not dreamt of in a landsman's philosophy. A mail steamer has to reckon both with tides and with the requirements of the Post Office. The sand bar which lies off the mouth of the Mersey can only be crossed by the largest ships within an hour or two of high water (before or after). The tides, therefore, determine the hours of sailing from Liverpool. On the other hand, the Postmaster-General fixes the hours for the transfer of the mails to the steamers at Queenstown and Moville. The steamers for New York go to the south of Ireland, calling at Queenstown for mails; those for Nova Scotia and the St. Lawrence keep north of Ireland and take up the mails at Moville, an insignificant place in Lough Foyle, a few miles from Londonderry. The arrangement between the Post Office and Messrs. Allan is that the mails shall be handed to the latter at Moville about five or six o'clock on Friday evening. The steamers, therefore, have to leave Liverpool at such an hour on Thursday as to allow of their crossing the bar at or near high water, and of their being in Lough Foyle by the appointed hour on Friday afternoon. When, as in the case of the *Parisian* on July 5th, the steamer gets out of the Mersey early on Thursday evening, she is able to steam to Moville in quite a leisurely way and then have several hours to spare.

IN IRISH WATERS.

We, of course, passed to the south of the Isle of Man early in the night, and through the North Channel, between the Irish and Scottish coasts, a few hours later. When I came on deck in the morning, we were passing Rathlin Island; and the hills of Cantire—that curious, long, narrow peninsula, which Scotland throws out like a huge pier in the direction of the Irish coast—were sinking out of sight over our stern. Very soon afterwards, we were abreast of the Giant's Causeway, and many eyes were strained, and many glasses brought into requisition, in the hope that a glimpse might be obtained of that great natural curiosity. But the distance was apparently too great. I could not myself discover anything like the strange columnar basaltic

rock, and the owner of the best glass on board appeared to be equally at a loss. Having failed to see the curiosity, we agreed unanimously that the thing was probably not worth seeing, and that we were not a bit disappointed. By about mid-day, we were in Lough Foyle, with our anchor down, opposite the small collection of houses which appears to constitute Moville, and waiting for the arrival of the steam tender from Derry with the mails.

We waited at least five hours, and the business was a trifle monotonous. Those of us who had never been in Londonderry debated the question whether we might not as well improve the time by running up the bay and getting a look at that very patriotic city. But the first difficulty was to discover the means of conveyance. This serious question, moreover, arose:—Suppose we could get anybody to row or drive us up to the city, how could we be absolutely certain ("cock-sure," as somebody said) of getting back in time? We had visions of capsize boats, broken-down vehicles, and other possible causes of delay; visions of ourselves rushing back at breathless speed to find that the *Parisian* had disappeared; visions of the *Parisian* ploughing the Atlantic without us, and carrying our forsaken baggage far away from its natural protectors. As these visions grew more vivid, and as the time was already passing rapidly, we one and all decided to stick to our ship, and relieve the tedium of the afternoon's detention as best we could.

Remembering, at this opportune moment, that Mr. Alexander Pope had given the world his word for it that—

"The proper study of mankind is man,"

and that some other philosopher had added "and women," it occurred to us (the passengers), or, at least, to some of us, that we might do more than quiz one another. So we quizzed—and were quizzed.

THE STEERAGE PASSENGERS.

I first turned my attention to the steerage passengers. These numbered 650, and comprised persons of various nationalities, English, German, and Scandinavians predominating, as usual. As the ship lay in the quiet waters of the Irish lough, these emigrants (for such nearly all of them were) were lounging or strolling about those parts of the lower deck set apart for their use. These poor people certainly constituted a curious but deeply interesting study. They were of all sorts, sizes, ages, and degrees of tidiness or seediness. Little children were tumbling over each other in their boisterous mirth, happily unconscious of the miseries which the coming week might possibly have in store for them, and of the hardships which they might have to endure while their parents were making homes for them in a strange land. There were old people—men and women whose lives' work was evidently nearly over, and who, let us hope, were on their way to spend the evening of their lives in the homes of prosperous sons and daughters who had preceded them to the Land of Promise. There were clean, tidy, serious-looking men and women in the prime of life—the very pick and flower of the working classes of Europe, the best of all emigrants. This is the class whose physical strength, remarkable powers of endurance, unflagging industry, and indomitable perseverance have done more than all other causes to build up the Great Republic, and, I may add, the great, though smaller, Dominion of Canada. But there were a few persons among the emigrants (they were, I am

glad to say, a small minority) whose slatternly appearance indicated that they would be as little of an acquisition to the New World as they were of a loss to the Old World on which they had turned their backs.

The steerage of an ocean steamer, although a palace compared with the corresponding places in emigrant sailing ships a generation ago, is hardly even now the place which a lady would choose for making an elaborate toilet in. But tidy people will contrive somehow or other to be tidy anywhere—always provided that, if they are at sea, the sea behaves itself. For sea-sickness is the one thing which levels all alike—duke and pauper, Jew and Gentile, Tory and Radical; rendering men and women alike utterly oblivious to everything like "appearances" and conventionalisms, and to a good deal more. But when the sea is tolerably calm and the weather favourable, those steerage passengers who happen to have cleanliness and tidiness in their blood are almost invariably clean and tidy, notwithstanding their limited accommodation. Those who are slatternly at such times would probably be slatternly all the same if they had the run of all the saloon accommodation.

Looking down upon the great crowd of emigrants as we lay at rest in Lough Foyle, and thinking particularly of the women and children, whose sufferings are very great in bad weather, I felt benevolently disposed to revoke the hope I had half entertained that I might be fortunate enough to see a storm—a moderate one, of course. "For the sake of these poor people," I said to myself, "I will gladly resign the pleasure of seeing how the *Parisian* performs in a gale. I will take all that on trust from some old salt who has seen her do it." I did not, it is true, recite any liturgy, in the hope of somehow helping to bring my desires to pass; but my desires were none the less heartfelt. I certainly felt that, in giving up the hope (let me say the *half*-hope; shall I say the *half*-hope, not unmixed with just a little apprehension?) of seeing a gale, I was acting in a spirit of genuine self-sacrifice. In short, I "felt good," as the Americans say. But then what was I, as against 650 of my kind, that I should prefer my "pleasure" to theirs?

At the risk of getting a little ahead of my story, I may here remark that my self-sacrifice had its reward. We had a beautiful passage. No cargo of emigrants ever crossed the Atlantic under pleasanter auspices; and, of course, I was done out of my gale. That is still a "treat" in store, though I have crossed the ocean again since July.

FUN FOR THE EMIGRANTS.

While we still lay at Moville, it began to be pretty evident that the steerage passengers, at any rate, would not be allowed to suffer much from the tedium of the voyage. A party of Salvationists, or some similar body, formed themselves into a group and sang some of their stirring "hymns." I take the personal responsibility of using the word "stirring," but I quote the word "hymns" because I do not care for the heavy responsibility of calling the words by that name. Anyhow, the singers made things lively for a time. But there was a rival body of vocalists, consisting of three or four Germans, who sang part songs very nicely, and were attentively listened to by saloon and steerage passengers alike. The "boss" entertainer, however (as we are on the way to America, we may as well begin to use the American language), was a young Englishman brimming over with comicality, and as lithe and active as a greased monkey. For hours

at a stretch, this lively young gentleman kept the whole ship in a roar. He could deliver a Temperance lecture, preach a sermon, or speak on any other conceivable subject, with unmovable gravity. From the work of a lecturer, he would pass to that of an auctioneer. Standing on a raised part of the deck, with hundreds of the emigrants crowding round him, he put anything and everything up to auction, from the great ship herself down to the shabby hat of a fellow-passenger. If the owner of the hat objected, he "put up" the owner himself, described his numerous defects with the greatest candour, and started the bidding at about 2½d. Competition was sometimes so slack that he had to buy in the "lot" at two or three shillings; but sometimes the passenger was sold and handed over to the buyer, with no end of curious advice as to how he was to be treated. It was useless for anybody to protest or to resist. The comic man was master of the situation. It was so clear that his fun was entirely good-humoured, without the smallest trace of malice, that any resentment shown by his human "lots" or other victims was instantly laughed away. Those who had been most successfully held up to ridicule, or made the objects of the roughest horse-play, were compelled at last, by the very infection of merriment, to join, more or less grimly, in the boisterous laughter which had been raised at their own expense. My travelling companion sought an opportunity of questioning this comic man as to his occupation and his object in emigrating. He said at first that he was a butcher, and was going to America in the hope of finding something to do in his own line. "But," my friend said, "you have surely done something in your time beyond butchering?" and he then admitted that he had had an engagement at one of the Birmingham theatres. His peculiar talent would certainly run to waste in a slaughter-house, and I have very little doubt that by this time he is "corner man" in some troupe of "nigger" melodists or leading comedian at a theatre.

THE MAILS.

But I must not forget that we are still at Moville. It was not until after five o'clock that the Londonderry tug came alongside with the Canadian mails. Those who had never before seen a foreign mail had their eyes opened as to the extent of the correspondence between England and her greatest colony. It seemed as if the flow of heavy bags, crammed with letters and newspapers, from the tug to the *Parisian*, would never cease. How many tons the mail weighed I cannot say, but I have little doubt that the bags would have filled two large vans. The smartness with which our ship was got under way as soon as the last bag was on board was in striking contrast to the leisurely fashion in which we left the Mersey the night before. The circumstances had, of course, changed. The *Parisian* had now Her Majesty's mails on board, and her captain's business forthwith was to push on so as to land those mails at Rimouski, on the St. Lawrence, at the earliest possible moment. Within, I should say, five minutes of the delivery of the last bag, the iron giants down in the hold of the ship began to sway their mighty arms up and down and to and fro, and from that labour they never once ceased until, at noon on the following Friday, we cast anchor opposite Rimouski.

PROGRESS IN ATLANTIC NAVIGATION.

The *Parisian* is the newest, the largest, and the fastest of the famous Allan line of steamers, and is a fair

example of the fine vessels by which communication is now maintained between this country and America. These ships are deservedly reckoned among the greatest triumphs of scientific skill. By means of them, the navigation of the stormiest of oceans (the North Atlantic) has been reduced to a matter of almost absolute certainty and safety. And while the safety of the navigation has increased with the lapse of every successive year, the time occupied in the passage has been gradually shortened. The year 1842 was not so very long ago, but at that time Atlantic navigation by steam was in its infancy. It was in that year that Charles Dickens made the memorable voyage which he afterwards described (as only he could describe it) in his "American Notes." His steamer (called a "packet" in those days) was the *Britannia*. She and her sister ships were regarded as marvels. The *Britannia* was a vessel of 1,200 tons, and it took her 18 days to carry Charles Dickens to Boston. The second generation of steamships reduced the passage to New York (which is farther than Boston) to thirteen or fourteen days; and when, some years later, a line of still finer boats reduced the time to ten or eleven days, it was thought that finality had at last been reached. But there is no such thing as finality in the march of science. Ten years ago, the passage was reduced to nine days, and the size of the ships brought up to 4,000 or 4,500 tons. The last ten years have, however, witnessed a further marked advance in both tonnage and speed. There are now on the New York route at least four vessels of from 7,000 to 8,000 tons, viz., the *City of Rome*, of the Anchor Line; the *Servia*, of the Cunard Line; the *Alaska* and *Oregon*, of the Guion Line. All these vessels are capable of making the run from Liverpool to New York in less than eight days; two of them can do it, under specially favourable conditions, in a little over seven.

The Allan boats do not run to New York. Their chief route is from Liverpool to Quebec. During the winter, the St. Lawrence is frozen, and the steamers then land their mails at Halifax. As I remarked at the outset, the *Parisian* is the latest and finest addition to the Allan fleet. She is only about three years old, and embodies every improvement which had been effected in marine architecture up to the time she was designed. She is about 450 feet (150 yards) in length and 46 feet in breadth, and she is of 5,500 tons burden. Her saloon is a beautiful apartment extending across the whole width of the ship about mid-way between the bows and the engines. This arrangement, which is now almost universally adopted by the great steamship companies, keeps the saloon almost entirely free from that ugly and stomach-disturbing vibration which is invariably felt in a saloon situated astern of the engines, and therefore over the screw-shaft. The first-class cabins are grouped about the neighbourhood of the saloon—some being forward of it, and others (the larger number) filling the space on each side between the saloon and the engines.

A BIG NAME FOR A LITTLE THING.

But why, in the name of outraged Reason, do the steamship companies conspire to call their cabins "state-rooms?" The word "state-room" has a magnificent roll about it, and suggests to the innocents who have never been to sea a lofty and spacious apartment, of a kind which is found only in the palaces of the wealthy. As regards three-fourths of the "state-rooms" in all the Atlantic steamers, the reality is a closet about 6½ feet square, with two berths (one over

the other) on one side, a narrow fixed sofa on the opposite side, and a free space, from two to three feet wide, in which the two occupants have to dress, undress, and do their fighting if they happen to quarrel. Talk about "room to swing a cat!" Why, there is not room to swing a blind kitten. There are, of course, larger "state-rooms," intended to accommodate three or four persons, but these can only be secured for the exclusive use of one or two persons by extra payment. My friend and I, for instance, secured a three-berth room in the *Parisian*. This was over 10 feet long, and we were able to have all our baggage with us, instead of sending the greater part down into the hold. All the cabins, whether large or small, are beautifully furnished, and everything about them is as clean as a new pin. The ventilation is usually good, even when the state of the weather does not allow the bull's-eye windows to be opened. There was, moreover, no suspicion on board the *Parisian* that the cabin contained any other living creatures beyond those who had paid their fares. This immunity is not always to be relied on at sea, as the following true narrative will show.

A FOUR-FOOTED BEDFELLOW.

In the month of July, 1881, I was on a voyage to Gibraltar on board the Peninsular and Oriental steamer *Mirzapore*—not an old boat, by any means. My cabin, which I was supposed to have to myself, opened upon the deck—an arrangement, by the way, which would not do at all in vessels regularly navigating the stormy North Atlantic. During the first or second night after leaving Southampton, my sleep was a good deal disturbed—why, I could not tell, although I was half conscious in my semi-wakeful intervals that I had not the bed to myself. At last, just as day was breaking, a movement as of some weight on my feet woke me out-right. I raised my head cautiously and looked down towards the region of my toes; and there, lying on the coverlet of the bed, I saw one of the finest rats it was ever my privilege and pleasure to make the acquaintance of. After holding a brief council of war with myself, I summoned all my forces—horse, foot, and artillery (especially foot)—for a supreme effort, and gave such a vigorous kick upward through the bed-clothes that his ratship, much astonished no doubt, went flying in a series of somersaults towards the ceiling. Falling heavily to the floor, he instantly scuttled out of sight under my berth. I immediately dressed and called the steward who had charge of the cabin. He was one of those men who never allow anything to surprise them. Speaking as if this particular rat was an old acquaintance of his, whom he had been expecting to give him a call, he simply said, "Oh! he's here, is he? I'll have him to-night!" He would probably have taken the matter quite as coolly if I had assured him that the sea-serpent had put his head into my window and said, "Come out and have a walk, old fellow!" Whether my bed-fellow was caught, as per steward's promise, I do not know, for I insisted on moving to another room in a distant part of the ship.

PRECAUTIONS AGAINST STORMS AND MISHAPS.

The *Parisian*, in common with all large steamers now-a-days, is built of iron or steel—I believe the latter. And it is not only her double hull which is of this metal. Her principal decks are of steel (covered with wood, of course); so also, are all the erections above deck. The great danger in a heavy gale is that

the deck erections may be swept away, and that, the staircases and other openings into the body of the ship being thus left unprotected, the water will fill the hold, extinguish the boiler fires, and ultimately overwhelm the ship. This is precisely what happened in the case of the steamship *London*, in the Bay of Biscay, fifteen or twenty years ago. Her deck erections, being of wood, were swept away, and the vessel was henceforth at the mercy of the waves. So far as one can see, it seems impossible that the steel erections which are riveted to the steel decks of the great modern steamers could be washed away by the heaviest seas ever met with even on the Atlantic. One of the most serious dangers besetting ocean navigation is thus virtually abolished.

The *Parisian* is, of course, built in seven or eight water-tight compartments, so that, if water should by any accident get into one part of her, it could be excluded from the other compartments and serious danger be thus averted.

So far as the structure and machinery of these great ships are concerned, the two mishaps most to be dreaded are the disabling of the rudder and the breakdown of the engines. The latter mishap, which generally takes the form of a fracture of the screw-shaft, has befallen more than one of the favourite steamers now on the service. Whenever it happens, the steamer is, of course, immediately reduced to the condition of a sailing ship; and as few steamers carry sail at all in proportion to their size, the progress henceforth made is very slow. A complete safeguard against such disablement will no doubt be ultimately found in the adoption of two distinct sets of engines and two screws, which may be run either separately or together. The loss or disablement of a rudder is, in bad weather, more serious than the breakdown of the engines, in the case of any steamer of fair sailing power. The suggested plan of duplicate screws would probably abolish the risk arising from the loss of a rudder, and I have long thought that there must be other modes of providing in a rough way for such a catastrophe—such, for instance, as the fixing of emergency rudders to the sides of the ship, in such positions that they would be out of the way and not retard the progress of the vessel when not in use.

A FLOATING CITY.

Including her crew, the *Parisian* carried nearly a thousand persons to Quebec on the trip on which I went by her. It was difficult to realise that there was such a host on board. The ship is so large, and contains so many apartments of one sort and another, that a thousand persons are stowed away out of sight with the greatest ease. In fact, the vessel can carry several hundred more than were aboard her on this July passage, for her steerage alone is certified to have accommodation for about a thousand. If, therefore, she ever happens to carry out her full complement, she must at such times have something like 1,400 persons on board. I may add that so little did she appear like crowded when I crossed in her, that I had no idea, until we reached Quebec, that I had formed one of a company of about a thousand. The exact numbers were:—Cabin passengers, 124; intermediate, 47; steerage, 658; total passengers, 829. The crew was probably at least 150 more.

CABIN PASSENGERS' ACCOMMODATION.

To the cabin passenger, life on board a great Atlantic steamer is (weather permitting) very much like life in a

first-class hotel. Each person has a seat in the saloon allotted to him at the first meal and that seat he retains throughout the voyage. The seats in the saloon of the *Parisian* are cushioned chairs which, though fixed to the floor (a very necessary precaution), revolve on their centres, so that any diner may turn round, rise, and leave the table, without disturbing his neighbours, and as promptly as the most adverse circumstances may render necessary. Breakfast is served from about half-past eight till ten or half-past ten, luncheon at one, and dinner at six. There is no regular meal after dinner, but tea, coffee, and light refreshments are served to those who require them up to the time at which the saloon is closed.

The saloon is the chief sitting-room for cabin passengers between meals and during the evening; but the *Parisian* has, in addition, a handsome apartment over the saloon, containing a piano and a number of card tables, and surrounded by luxuriously-cushioned seats. This room is lighted mainly from above by a sky-light, and immediately under the sky-light is a large oval opening into the saloon, protected by a handsome railing. This arrangement adds greatly to the lightness, ventilation, and cheerfulness of the saloon. In addition to these two main apartments, there are a ladies' cabin close to the saloon, and a gentlemen's smoking room in a distant part of the ship.

OUR VOYAGE.

Our voyage was simply a week's pleasure trip. The sea was absolutely calm on every day but one. On that particular day, we got into a rather heavy swell—the result, probably, of a gale which had recently given that part of the ocean a stir-up, or of a storm which was even then doing business somewhat further south. We had no wind whatever, and though the water was not smooth, the waves were. That, perhaps, sounds Irish-like; but what I mean is this—that the surface was broken into long, regular waves. There was no foam, and the surface of each wave was as smooth as if, like Yankee lightning, it had been greased. This was the only day when I noticed more than two or three empty chairs at meals. There were a good many absentees on that occasion, for the ship rolled from side to side with a long, regular, majestic movement, which was very pretty to see, but (to some people) eminently unpleasant to feel. For the first and only time during the voyage, the guards ("fiddlers," as some call them) had to be attached to the tables. For the benefit of people who stay at home, I may remark that these guards are simply narrow strips of wood fixed to the tables, to prevent the plates and dishes from coming off in a sort of avalanche into the diners' laps when the ship is exceptionally far gone in liquor, and is behaving accordingly. There are four strips, two of which are fixed to the edges, and two along the centre of the table in such a way as to divide its width into three narrow spaces. The dishes stand in the middle alley and the plates in the two side alleys. The plates and dishes are thus prevented from mixing promiscuously, and both are kept from sliding off altogether. A certain amount of latitude is allowed to both plates and dishes, and they slip backward and forward to the full length of their tether at every roll. Sometimes, when the ship takes an unusually deep dip, the clatter of crockery is rather alarming to the novice, and he (or she) may occasionally be heard to mix sudden exclamations of surprise or alarm with the rattle of glass and earthenware.

THE BOTTOM KNOCKED OUT OF A BIT OF POETRY.

"The sails of Britain whiten every sea!" That is a very pretty and patriotic assertion which one often hears after dinner, when orators are full of wine, and of metaphors (mixed). There is only one drawback to the assertion, but that is serious. It is not true—not nearly enough, indeed, to justify the most poetical of orators in making it. My experience is confined to the Bay of Biscay and the North Atlantic, but they are the most frequented of all seas. In a voyage to Gibraltar, the vessels one passes are certainly very numerous; but that, of course, is because all the British traffic to the Mediterranean, to India, China, Australia, the Cape—to all parts, indeed, except America—is concentrated on that route. The case is very different on the routes followed by the American steamers. After getting clear of the Irish coast, we sighted only two vessels (both large steamers) until we got fairly into the St. Lawrence. My experience on the return voyage was very similar. We passed only three vessels between the neighbourhood of New York and Cape Clear. Hundreds of vessels are, of course, always crossing; but the great "waste of waters" is so great that there is plenty of elbow-room for all. Collisions seldom occur out on the broad Atlantic. It is in the crowded approaches to the great ports, and especially in foggy weather, that any serious dangers of such a mishap need be apprehended.

A GRAND EXHIBITION.—ANOTHER ILLUSION DONE FOR.

On the morning of the day on which we sighted land (Wednesday, July 11th) I was called early to see a grand procession of icebergs. We had been looking out for these wanderers the whole of the previous day, and had at last begun to fear that we were going to miss the sight. Captain Wylie (good captain and courteous gentleman) reassured us, however, by promising us that we should positively be treated to a display if we were good. He had apparently made arrangements with the northerly winds and currents to deliver a supply of ice off the Labrador coast on that particular Wednesday morning. The display was superb, and did great credit to all concerned. There were samples of all sorts of icebergs, from the long, low mass, like a floating island, to the majestic, mountain-like mass, from 100 to 200 feet in height. The fantastic shapes and exquisitely delicate colours of the ice were the wonder and the admiration of all beholders. One enthusiastic passenger, who happened to have a photographic apparatus, took "portraits" of one or two of the finest masses through his cabin window. Their *shapes* he caught accurately enough, but their exquisite tints of blue and green were beyond the reach of any photographic process yet invented.

Yet one thing lacked those bergs sublime.

(I beg the late Lord Byron's pardon for saying so.) I examined the largest of them carefully, from top to bottom, by means of my glass; and not finding what I looked for, I cried (addressing nobody in particular): "Where's the bear?" "What bear?" somebody asked. "What bear?" I replied; "why, the bear. Were you never a boy? (and I looked my questioner straight in the eye.) If you never were, I beg to remark that I was—at (alas!) some ancient period of the world's history. And as a child, my attention was frequently drawn to pictures of ice-bergs. But never an ice-berg did I see thus represented which had not on some part of it a huge polar bear, sitting on its haunches, and looking as

sad and disconsolate as if he had just returned from his mother-in-law's funeral or cremation. I ask, therefore, "Where's the bear?" And then I looked the huge ice mountain up and down again, but no trace of living creature could I see. Then I sadly woke up to the fact that another of my youthful illusions had vanished; and I asked myself seriously, in the words of that cheerful author, Mr. Mallock, "*Is life worth living?*" The artists who draw ice-bearings fancy, I suppose, that to "throw in" an old bear is to give a reasonable and appropriate finishing touch to their pictures. But these gentlemen trifle with truth, and, as we have seen, encourage illusions the dissipation of which causes the keenest pangs. Ladies and gentlemen, let us, in art and in everything else, stand by the Fact, even if we do not, like Chelsea and Boston philosophers, spell it with a big F.

THE SHORTEST RUN ON RECORD.

Ours was in more ways than one a memorable voyage. I have already remarked on the thoughtful consideration of the Atlantic in giving us a rocking (and that a gentle one) on only a singleday. But, besides being a very calm passage, ours was up to that time the shortest ever made from land to land, on the Quebec route. I saw the last of the Irish lights after ten o'clock on the evening of Friday, July 6th, and at three o'clock on the following Wednesday afternoon we sighted Belle Isle, at the entrance of the Straits of Belle Isle, between Labrador and Newfoundland. According to the ship's mode of reckoning, our time from land to land was only 4 days 17 hours 25 minutes—the shortest time on record. Belle Isle is 750 miles from Quebec, so that a steamer "nearly two and a half days in the Strait of Belle Isle, the Gulf of St. Lawrence, and the River St. Lawrence, after sighting land. The parts of Labrador and Newfoundland which skirt the strait are barren and inhospitable in the extreme. Although it was the 10th of July when we steamed up the strait, a good deal of snow was lying on the Labrador side, almost down to the water's edge—and this, be it remembered, in about the same latitude as London and Bristol. After passing the strait, we again lost sight of land for some hours, the Gulf of St. Lawrence being an almost land-locked sea of considerable size. Passing to the south of the dreary-looking island of Anticosti, more than 100 miles in length, we presently approached the real River St. Lawrence, which for a long distance is a mere arm of the sea, and a very wide one. The weather being very thick after we first sighted Anticosti, we missed all the grand scenery which skirts the river on both sides, especially where the Saguinay River joins it. We reached Rimouski at noon on Friday. There we landed the mails, which were taken thence to Quebec (150 miles) by rail, arriving at that city before us. Here, also, we landed a few passengers, including the Prime Minister of Nova Scotia, one or two other gentlemen bound for the same colony, and a few others who wished to catch trains at Quebec before the steamer could possibly arrive there. It was nearly 11 o'clock at night before we who remained on board sighted the lights of the city, rising tier above tier from the water's edge. Quebec is called the Gibraltar of America; and those who have seen the original Gibraltar from the bay on a dark night, or who have looked up at the Old Town and the Castle of Edinburgh at night from Princes Street, can form a very good idea of what Quebec looked like when I first set eyes on it.

THE SALOON PASSENGERS.

The *Parisian's* saloon passengers comprised, among others, the Earl and Countess of Onslow, Col. Alan Gardner; Mr. W. D. Howells, the popular American novelist, with his wife and three children; the Hon. W. T. Pipes, Prime Minister of Nova Scotia; Mr. Dingley, a prominent newspaper proprietor in Maine, and Mrs. Dingley; three or four Catholic priests, belonging to one of the religious orders which the French Government has recently suppressed; one or two Protestant clergymen; Mr. Power O'Donoghue, Mus. Doc., whose aid in getting up concerts was invaluable; Dr. Souvielle, a French doctor settled in Canada, whose quack-like advertisements are in all the colonial papers; Mr. Rose, formerly British chief consul in Sicily, and brother of the Mr. Rose who was recently carried off by brigands near Palermo and redeemed for a large sum; Mr. Davies, the proprietor of the largest pork-packing establishment in Canada; and a little, good-tempered cosmopolitan named *Husbands*, whose address was Valparaiso "and elsewhere," and who was understood in some vague way to be largely interested in telephone patents. This little man was to us what the comic butcher aforesaid was to the emigrants. He kept things lively. He got up concerts, balls, subscriptions for seamen's hospitals and the like, and, indeed, made himself generally useful. There was plenty of musical talent on board, and he knew how to get at it. His concerts were very successful; and on the evening when we were running up the Straits of Belle Isle he arranged for a ball, some of the dances being dubbed "*Iceberg Waltz*," "*Labrador Lancers*," "*Newfoundland Polka*," &c. Altogether, that five feet of merry humanity named *Husbands* was a great acquisition to the ship. Nobody had the blues while he was "around," as the Americans say. I should like to say a good deal more about my fellow-passengers, but I have already spun too long a yarn about my voyage. Some of the passengers, whose acquaintance I made, I afterwards saw in their own homes, and I must content myself with a brief reference to these when I describe the kindness and hospitality with which they received me on my travelling companion.

THE AMERICAN RAILWAYS.

A STEAM-MADE COUNTRY.

"Made by steam!" Such is the inscription which many manufacturers attach to their goods. The United States and Canada might be very appropriately labelled in the same fashion. But for steam power, those great countries must have been still in a state of nature to an infinitely larger extent than they are to-day. It happened that, within a generation of the revolution which freed the colonies south of the St. Lawrence from English rule, the genius of Watt, of Fulton, and of Stephenson revealed to the world the existence of a force which was capable of doing all the mere physical work of the human race. Two of these great inventors showed that the subtle fluid of water was a power whose sphere was not confined within the narrow bounds of factory walls, but was perfectly capable of taking the place of horses on our roads and of the winds on the ocean. The era of steam locomotion had come. At that time, the United States were little more than a coast line. All the considerable cities were on or near the Atlantic seaboard; and, except in the neighbourhood of the great rivers,

the whole of the vast interior was almost entirely unexplored. The American hailed the advent of the new power with characteristic enthusiasm, and set themselves with their traditional energy to the task of securing all the advantages it offered. The old States were soon knit together with a network of railway lines which placed all the chief cities in communication with each other. The rivers, too, were soon alive with steamboats. In or about the year 1840, steam navigation had so far advanced that steamships began to traverse the Atlantic regularly. By this means, the unappropriated but fertile soil of the West was brought within easy reach of the overflowing populations of Europe, and at the same time the markets of the Old World were brought nearer to the abounding harvests of the New World. The Eastern States having been supplied with such railway accommodation as they required, the eyes of speculators and engineers began to be turned westward. In a very short time, the railroad pioneers were seen to be plunging into primeval forests and crossing prairies which had hitherto been the home of the wild beast, and of the almost equally savage Indian. And wherever the railroad went, there population immediately followed. Agricultural immigrants settled down in thousands within easy reach of the new roads, and set to work to grow crops, which were carried off over those roads, either to the great cities of the Eastern States or to the still more distant European consumer. Very soon, the Mississippi was reached at more points than one, and here for a time the railway men drew rein. But the halt was only a brief one—a sort of breathing-time preparatory to the longer runs which had yet to be accomplished beyond the Father of Waters. It was not until the year 1865 that the first rail was laid on the Union Pacific Railway—the great road which, with the Central Pacific, now covers the 1,900 miles between the Mississippi at Omaha and the Pacific coast at San Francisco. Besides these great original trunk lines, the country west of the Mississippi is now intersected by thousands of miles of roads constructed by other companies, and every year adds largely to the mileage. It is perfectly safe to assert that no other known power could have done what steam has done during the last 40 years in enabling the Americans to take possession of their vast heritage of territory, in the names of humanity and civilization.

I may remark, in this connection, that, apart from railways and steam-boats, the Americans have made steam their servant of all work to even a greater extent than we have in England—that is to say, wherever water power has not been procurable. I make this exception because it is an important one; for, owing to the abundance of water-power, especially in the New England States, many manufactures which in this country are carried on entirely by means of steam are there conducted in the neighbourhood of great waterfalls, which supply all the power needed.

THE EXTENT OF AMERICAN RAILWAYS.

The best way of forming something like an intelligible idea of the extent of the American railway system is to compare, or rather to contrast, its mileage with that of the railways in this country. The total length of railways in Great Britain and Ireland is about 18,500 miles. American railways represented a mileage of 113,320 miles at the end of 1882. The lines opened during 1882 alone measured 11,591 miles. The mileage of those opened during 1883 is much less; but I shall probably be within the mark

if I say that America (exclusive of Canada) has at the present moment 120,000 miles, or about six and a half times our own mileage. If the immense area of North America be taken into account, 120,000 miles of railway cannot be regarded as large; but when we regard the mileage in proportion to the population, we see that it is very great. We have 18,500 miles to 35,000,000 of population. America has 120,000 miles to a population of 51,000,000. In other words, there is one mile of railway in the British Islands to every 1900 persons, whereas the United States have one mile to every 425 persons. Their mileage is, therefore, proportionately nearly five times as great as ours.

There are, however, other ways of estimating a railway system besides measuring its mere length; and when we do this with reference to the British and the American systems, we Britishers come out with flying colours. The greater part of the American railways have only a single line. A double line is as much an exception in the States and Canada as a single line is in England. Most of the trunk lines which connect the great cities in the Eastern States are double. The New York Central and Hudson River Railroad (Vanderbilt's trunk line) has four tracks over the greater part of its length, and in this respect resembles those parts of the London and North Western and the Great Western which are nearest to London. But with these and a few other exceptions, all the lines are single. As the land required for the lines seldom cost the companies a cent, as the lines are mostly single, and as (as we shall see presently) there is an almost entire absence of bridges, the cost of construction was, of course, trifling compared with that of our English railways. As a matter of fact, the total capital of all the American railroad companies at the end of 1882 was only about seven hundred millions sterling, which is little if any more than British companies have paid for the construction of one-eighth of the same mileage.

LAND GRANTS.

The construction of railways through the vast solitudes of the uninhabited West has been greatly facilitated by the system of Government grants of land. The Union Pacific, the Central Pacific, the Northern Pacific, the Canadian Pacific, the Chicago and North Western, and several other great companies have received free gifts of millions of acres of land alongside the lines they have constructed—or, as they say, "built." The Canadian Pacific is to have twenty-five millions of dollars and twenty-five millions of acres for rendering the Dominion the vast service of connecting the Atlantic with the Pacific by a line wholly within Canadian territory. An official in the land office of the Chicago and North Western told me that he had still a trifle of some seventeen million acres to dispose of—that is to say, a territory equal to about seventeen county Somersets. He talked about having half a kingdom for sale just as coolly as if he had been offering a cask of sugar or a suit of clothes. The officials of the Union Pacific at Omaha told me pretty much the same, but I forget the exact acreage in their case.

The land grants are arranged in this fashion:—The map of the district through which the proposed line is to pass is marked out, to a distance of 20, 25, or 30 miles on each side of the track, into square blocks, exactly like a chess-board. These blocks, or sections, are six miles square, and therefore contain 36 square miles. Each section is then sub-divided in the same way into 36 square and equal parts, each part being, of

course, an exact square mile. In some of the States (I believe in all), two square miles out of every 36 are devoted to the purpose of founding and maintaining public schools, and the remaining 34 square miles are divided equally between the Government and the company. Supposing (to revert to the chess-board simile) the squares to be coloured black and white alternately, the Government retains the black squares and the company takes the white squares. As soon as the railway is made, settlers begin to arrive. Every settler makes business for the railway, and at the same time adds to the value of the remaining land. The result is that, in many cases, the railway lands come in time to represent an enormous value, and the principal proprietors of the lines become millionaires. One-half of the stock of the Central and Southern Pacific Railroads is said to belong to four persons—men who live in splendid palaces at San Francisco, and of course one-half of the unsold lands of these companies belongs necessarily to the same four lucky individuals. The Americans are beginning to use strong language about these huge land monopolists, and it is no doubt unfortunate that such vast tracts of the country should be in the hands of a very few persons. But a bargain is a bargain, and it is hardly fair to forget that the Government granted the land in return for what, at the time, was regarded as a fair equivalent—the construction of railways which no capitalists were prepared to make unless thus aided. It is now generally admitted that it would have been better to give the companies a fair amount in "cash down," rather than to place millions of acres of the soil at their disposal. It is easy to be wise after the event, but the monopolists can hardly be expected to surrender the advantages of the bargain they made at a time when the public took a different view of the case. It is, however, pretty certain that no more grants will be made to railway companies in the shape of land.

THE LINES.

"The line" is an expression almost unknown in America. What we call the "line" is there universally known as the "track." A double line is, of course, called a "double track." A level crossing—the crossing of a line and an ordinary road on the same level—is known in America as a "crossing at grade." Such crossings, instead of being the rare exceptions, as they are in England, are in America almost universal. Of this I shall have more to say presently.

In the early days of railroads (the Americans have no "railways"; they are all "railroads"), the lines, especially in remote districts, were laid in a very rough and primitive fashion. The rails were often of wood, shod with iron, which was nailed to the wood pretty much as a tire is nailed to the rim of a wheel. Sometimes the iron would get loose, and ultimately come off; but as the speed was not very great and the lines were usually level with the surrounding country, serious harm seldom resulted, even if a train ran off, or (same thing) was "ditched," to use another expressive word of the American railway vocabulary. Those who fancy that the bulk of the western lines are still of this primitive kind are vastly mistaken. The truth is, all the great main lines, in the West as well as in the East, are splendidly laid, in many cases with heavy steel rails. No inspection is needed to satisfy one as to their solidity of construction. The smoothness with which the cars run almost everywhere is ample evidence of the fact. There are exceptions, of course, but they are few, and are to be met with only on cross-country and comparatively unimportant roads.

Wood being more plentiful than iron, the iron rests into which the rails of an English railway are wedged, and which we call chairs, are entirely dispensed with on the other side of the Atlantic, and an unusual number of timber ties (sleepers, as we call them) are used instead. The rails are simply spiked to these ties, just as the rails were fastened to the sleepers on the Somerset & Dorset Railway in the early days of that line. English railway engineers have never considered this mere spiking of the rails to the sleepers sufficient, but it is evident that the experience of the Americans has satisfied them that the plan, as they practise it, is as safe as well as a cheap one.

The gauge of most of the American railways is the same as the standard gauge in England (4ft. 8½ in.), but there are some notable exceptions. I travelled nearly 2,000 miles in Colorado and Utah over narrow-gauge lines—i.e., over lines only three feet wide. But though the line is narrow, it does not at all follow that the carriages are narrow too. Indeed, the carriages (or rather the "cars," for the Americans never apply the word "carriage" to a railway vehicle) overhang the track on both sides in a manner which to any Englishman is simply amazing, and to a timid Englishman very suggestive of danger. But the narrow-gauge lines are apparently safe enough, except in the event of a serious obstruction being encountered on the line. In that case, the risk of the train being upset is manifestly greater than it would be if the engine rested on a broader base. I shall have occasion further on to describe a serious mishap which was due to a train running down a stray horse, and the results of which I had the good or bad fortune to witness.

From the Alleghany Mountains in the East to the Rocky Mountains in the West, America is virtually one vast plain, intersected in all directions by the Mississippi and Missouri Rivers and their numerous tributaries. I do not mean by this that the whole of the immense area thus indicated is at about the same level as compared with the level of the sea. This is by no means the case. The land, of course, rises from the Mississippi both to the East and to the West. The traveller who leaves Omaha or Kansas City (both on the river) for Denver or Pueblo, at the foot of the Rocky Mountains, rises more than 4,000 feet before he reaches the end of his 20 or 24 hours' journey. But he is unconscious of being thus raised the greater part of a mile in perpendicular height. He is travelling all the time over a gently undulating and apparently boundless plain, and has no idea that he is going uphill continually. Such, however, is the case. But for all railway construction purposes, the country may be regarded as almost perfectly flat. There are no mountain ranges (no hills, indeed, worth the name) to be crossed between the Alleghanies and the Rockies. The result is that, as regards that vast central district, the railway engineers had few obstacles to contend with except the great rivers, which it was necessary to bridge as a matter of course. For hundreds of miles "end-on," the construction of their lines did not involve the making of a cutting or embankment ten feet deep or high. In fact, the track often follows the gentle undulations of the prairie for scores of miles together, without rising a foot above or sinking a foot below the level of the surrounding country.

The European traveller, moreover, notices with astonishment that, except in the thickly-settled districts, the lines are entirely unfenced. Out on the prairies and the deserts of the Far West, fences are clearly unnecessary; for the wild animals are very few in number,

and those that are to be seen are not large enough to imperil anything but their own lives even if they stray on the rails. But in many of the partially-settled districts the absence of fences is a nuisance and a danger. Trains have frequently to pull up to allow the engineer, as the driver is called, to drive off cows and horses which persist in remaining on the rails in spite of the dismal shriek of his steam whistle. At night, the engines have to carry large and very powerful head lamps in order to scare off the trespassers, or, failing that, to enable the drivers to discover them in time. Sometimes the lamps, powerful as they are, fail to do either the one thing or the other. In such cases, the erring beast is made mincemeat of in a twinkling, and sometimes the train is thrown off the rails. In the thickly-settled States, fencing is universal. Beyond the Mississippi, it is as universally neglected. In the intermediate districts, the use of fences is extending, but not fast enough.

Another remarkable feature of the American railways is the almost entire absence of bridges over or under ordinary roads. Except in or near some of the great cities, the crossings are all on the level. It is possible to travel thousands of miles without passing under or over a single road bridge. On the prairies or in the newly-settled districts, the level crossings are all that can be reasonably expected; but in and near the cities they are dangerous in the extreme. It is only in the very thickest parts of the cities that the crossings are protected by means of gates and signalmen. Everywhere else, they are perfectly open, the following notice being in every case displayed on a board:—"Railroad Crossing. Look out for the Cars." The driver is supposed to cause his engine bell to be rung when approaching a crossing, but the rule is, I am afraid, often broken. At any rate, the papers contain every day accounts of dreadful accidents at such crossings, and the sacrifice of life thus caused appears to be regarded as a sad but unavoidable accompaniment of railway travelling. One of the most amazing things, indeed, about the American railway system is the way in which the lines are carried into and through some of the largest and busiest cities on the same level as the streets, or even along the streets themselves. The approach to a great city, such, for instance, as Chicago, is tedious in the extreme. While the train is still eight or ten miles from the terminus, it slackens speed and begins to make repeated stoppages, the engine bell tolling continuously. The last ten miles of the journey, through the city suburbs, take as long to cover as the previous 30 miles.

The repeated stoppages are at first very puzzling to the stranger, but he soon discovers the cause. Not only do the lines cross ordinary roads on the level, but they cross other railways in the same way. And these crossings are not provided either with a signal or a signalman! "How horribly dangerous, especially at night!" is the involuntary comment on this statement. Not at all! Collisions between trains at level crossings are very rare, and they are absolutely impossible if the very simple but peremptory order of the companies is observed. The order is simply this—that every train shall come to a dead stand a few yards short of every crossing. The one word "Stop!" in large letters on a board is displayed in the driver's face as he approaches the crossing; and he invariably stops in such a position that the engine is within a few yards of the crossing, where he can see up and down the cross line. It is obvious that, so long as this system is rigidly adhered to, no train can ever traverse a crossing at more than a

walking pace. If two trains approach the crossing at the same moment, they come to a standstill so near to each other that the drivers are able to arrive at a clear understanding as to which shall crawl across first. If only one train is approaching, the stoppage is only for a moment; but it is a real stoppage. I do not remember a single case in which any train I was in failed to come to a dead stand at a crossing, if only for a second. A mere slackening of speed at these crossings would be dangerous in the extreme. If the drivers were ordered, for instance, always to reduce speed at such points to 10 miles an hour, nothing is more certain (that is, if American and English enginemen are made of the same sort of stuff) that trains would be constantly crossing the dangerous points at 15, 20, or even 30 miles an hour. The difference between 10 and 20 miles an hour is merely a difference in degree, and the two rates may be easily confounded by an official whose attention can be only partially devoted to the question of speed. Coming to an actual standstill is a thing about which there can be no possibility of mistake; and, great as is the nuisance of repeated stoppages, the American railway companies are quite right in insisting on the strict observance of their rule so long as their lines cross and recross on the level as they do at present.

But in spite of all the crawling, all the caution, and all the bell-ringing with which the trains enter the cities, accidents are constantly happening. A Manchester gentleman, writing recently on this subject, described the American locomotives as walking about the streets arm-in-arm with the inhabitants. The metaphor is a bold one, but it is entirely justified by the facts; for the railway traffic, the horse traffic, and the foot traffic are in some cases mixed up in a manner which is perfectly astounding. Running slowly into a busy terminus like that of Buffalo, you see horses and vehicles moving along both sides of the train without a ghost of a fence between them and the cars. More than this, you see lads, and even young children, jumping on the steps of the cars to steal a ride, just as they run behind ordinary vehicles in England. I remember seeing a number of boys jump on the rear platform of a Baltimore and Philadelphia train, ride across a very long bridge (probably a mile), and jump off at the other end. (The train slackened to a walking pace, if it did not actually stop, at both ends.) The brakeman was in the rear car, but he took no notice of the boys, and it was evident that theirs was a kind of freak which was regarded with toleration.

THE ENGINES.

The general appearance of the American locomotive is familiar to everybody in these days of universal photography and illustrated newspapers. The staring head lamps, the large bell, the huge funnel-shaped chimney, the driver's "cab," and the curious sprawling concern in front, known as the "cow-catcher," mark it out as a distinct species of the genus locomotive. Stripped of these few peculiarities, the American engine would not differ materially from its European cousins. The boiler is usually made of great length and small diameter, and the weight of the structure is thus spread over a base of unusual length. The fore part of the engine usually rests on a four-wheel or six-wheel bogie carriage, the wheels being very small. The larger wheels, whether there be two pairs or three pairs, are always all of the same size, and coupled together on both sides.

The whistle is a thing of terror, which nobody who has heard it can ever get out of his ears. The shrill, prolonged shriek of an English engine, whose steam is

blowing off at 130lbs., and whose driver is savagely impatient, is not a pleasant thing to hear at close quarters. But the American whistle is like the loudest of English whistles, emitted by an engine suffering frightfully from bronchitis. The makers of this instrument of torture appear to pitch the thing (if there is any "pitch" about it) in a lower key than finds favour at the Crewe or Swindon works; and the result is a surly growl of a most unearthly kind, which appears to be more penetrating than even our own shrill whistle. The same gruff, ill-tempered noise is emitted, by way of signal, by the American steam-boats; and between the boats and the trains, a sojourner in a busy city where there are a good many of both, has a lively time of it. I hope I have said enough to make it clear that, as regards steam whistles, my patriotism is beyond question. The British article, in this line at least, for me, for me!

But the American engine has two strings to its bow—it has a large, heavy, sonorous bell, as well as a growling but penetrating whistle. A stranger to the country, sleeping near a great railway-station for the first time, is apt to wonder why all the city church bells begin to toll so persistently early in the morning. He presently discovers that the bells which disturb his slumbers are those of locomotives, and not of church steeples. The bell is the signal by which the stoker gives notice that the engine is moving, or that it is approaching a level crossing. Indeed, the stoker has time for little else than pulling his bell-cord when his train is running into or out of a large town. The tolling sometimes begins a quarter or half-an-hour before the terminus is reached, and continues with only brief intermissions until the train finally stops. One can have too much of this rather monotonous bell-ringing. I did more than once. But it is decidedly less objectionable than the whistle, and it is quite clear that the engine must make a good deal of noise of some sort or other so long as railway and ordinary traffic are so strangely mixed up as they are at present.

The object of the great funnel-shaped chimney is not so apparent at first sight as that of the bell. The funnel is, as a matter of fact, a receptacle for a great many of the ashes and small cinders which would otherwise be driven out of the chimney. The scattering of hot cinders is an evil against which it is necessary to provide, in a country where wood is often used as fuel, and where, in the dry season, serious fires are easily caused. The wide mouth of the funnel is covered with wire gauze. The steam and the finer ashes escape freely, but the larger particles which the blast carries forward and upward are stopped and fall back into the part of the funnel arranged for their reception.

The great head light, with its powerful reflector, is designed, as before explained, to frighten animals off the track, and to enable the driver to see some distance ahead.

The "cow-catcher" is intended to throw off any animals which may be foolish enough to defy or to disregard an approaching train. It is a strongly-made frame of wood, strengthened still further with iron stays. From the level of the framework of the engine, it slopes downward, and outward to right and left, like a fan. Its outer edge is so near the rails, that any obstruction rising more than six inches above them must necessarily be caught by it. The central point of the cow-catcher is the most forward. From that point it slopes rapidly backward until it fairly covers both rails. The apparatus thus presents two faces to any cow or other animal

that challenges it to do its worst. One face looks obliquely to the right and the other obliquely to the left. Unless, therefore, an obstruction is caught in its very centre by the central point, the tendency of the collision is to throw it clear of the rails, either to right or left, according to the side or face of the apparatus which catches it. The cow-catcher is a very necessary appendage to an engine in the districts where the lines are only partially fenced or not at all. The "catcher" of a large engine of the ordinary gauge is, no doubt, able to throw aside either a horse or a bullock, supposing it catches the animal in the right position. Sometimes it fails to do this, and then there is danger that the train may be derailed. I saw a narrow-gauge engine and tender, belonging to one of the Colorado lines, lying at the bottom of an embankment after a momentary struggle with a poor horse. In that case, the cow-catcher was smashed to pieces. So was the horse.

The ordinary American locomotive is probably not larger or more powerful than the average English engine; but American engines are not now all of the ordinary kind. One of the western railway companies has just taken a new departure in engine-building which places it far ahead of any European line. The Southern Pacific Railway Company, whose lines run southward from San Francisco to Los Angeles, and so on till they join other lines which connect them with the Atlantic coast and the Gulf of Mexico, are preparing to carry the wheat of California to New Orleans. The Company believe that corn for the European market will presently go that way, instead of making the tremendous and circuitous voyage round Cape Horn. It happens that this railway crosses a mountain chain near Los Angeles, in Southern California; and, as there is no tunnel, the gradients on both slopes are very long and heavy. They are, indeed, among the most wonderful examples of railway engineering in the world. The line is made to circle round and round in the most remarkable manner, and at one place to tie itself in a sort of knot by crossing itself at different levels. The economical working of a great traffic over this line involves the use of heavy engines of enormous power, and the Company have accordingly gone in this direction beyond all precedents. An official of the Company at San Francisco told me that the Sacramento engine-shops had recently constructed an engine whose gross weight was 94 tons, and that his directors were so satisfied with its performances that they had decided to go a step further, and had ordered plans to be prepared for a giant of 103 tons. "But," I said, "how about your bridges? Many American bridges are not too substantial. Were those on your southern line ever designed to carry such weights as you describe?" The official (who was not on the engineering staff) shrugged his shoulders and made a very dubious reply, from which I gathered that he would probably decline to accompany the 103-tonner on its first trip to the south. It is clear, from what I have said, that, in the matter of heavy locomotives, if in nothing else, Uncle Sam is at present "licking Creation"—always supposing that "Creation" in this case means our own planet. What steam locomotives may be like in Venus or Jupiter is, of course, beside the question.

THE ORDINARY CARS.

As I have before remarked, there are no railway "carriages" in America. All the railroad vehicles, including those for goods, are called cars. And, by the way, there are no "goods." All goods are called "freight," and the waggons in which they are conveyed

are "freight cars." These are very large, square, box-like structures, invariably covered, like our "lock-up" waggons, and are almost exactly alike, except in the colour they are painted and the companies' names they bear in large letters. They are much larger, heavier, and more capacious than any railway waggons I ever saw in Europe.

The passenger cars, like the freight cars, are of immense size and height. The ordinary car consists of one long apartment, with a door at each end, a narrow passage down the middle, and 12, 14, or even 16 seats on each side. As each seat comfortably accommodates two persons, the longest cars (those with 16 seats on each side) contain 64 persons each when filled. There is a window to every seat. All the windows are supposed to open upwards like the bottom sash of an ordinary window, but their ability to be thus raised is often purely imaginary. The sashes are made to fit very accurately, for the purpose of excluding dust in summer and cold in winter, and the fit is frequently so very good that the strongest passengers have, after an exhausting struggle, to give up the attempt to open them. I myself often worked at them till I was red in the face, touched in the wind, and just a little affected in the region of the temper. Then I would do as I do when I cannot solve a conundrum—"give it up," and soothe myself by reflecting on the superiority of the familiar British institution—the light sash which slides downwards, the supple strap with the holes in it, and the convenient button by which to graduate the height of the concern. But the American window is apt to try the temper (and the health) as much when it is up as when it resists all attempts to put it up. For it cannot by any amount of force be made to go up more than about half its own height. The consequence is that the draught, instead of passing over the head (as it does when an English carriage window is only partially open), strikes the passenger in the region of the side and chest, from the waist up to about the neck. Further, if the passenger wants to put his head out, he can only do so by means of a regular gymnastic feat; and getting it in again safely is still more difficult. If the somewhat heavy sash does happen to move easily in its grooves, the passenger who puts his head out has, moreover, to count on the possibility of its dropping on his neck through the slipping of the fastening. I was more than once guillotined in this fashion, and I found that the position was undignified as well as awkward. I am afraid, indeed, that my fellow-passengers laughed at me, for I regretted to observe that a disposition to make fun of other people's trials has been duly inherited by our American cousins.

Every American car has a small w.c. in one corner, and the sleeping and drawing-room cars have two such closets—one for ladies at one end, and one for gentlemen at the other end. These are conveniences which are indispensable in a country where the journeys are often measured by days rather than by hours. They constitute the one important feature of the American railway system which I would like to see grafted on to our own system. How to adapt it to our separate compartments is the question to be solved, and I confess I do not see how it is to be done. A closet for each and every compartment is, of course, out of the question—so, at least, it appears in the present stage of our railway development. At the same time, it is obvious that some such addition is becoming more and more desirable, for the express trains on our long main lines are year by year increasing the distances they run without drawing rein.

Every ordinary American car is furnished with a stove, and in the sleeping and parlour cars the heat is equally diffused by means of small iron pipes, which run along the sides and are coiled under the seats. In the matter of heating, the American railway companies (except in the South) have no option. The winters are so severe in most of the States, and particularly in Canada, that artificial heat is an absolute necessity. The car stoves do their work effectually—too effectually, indeed, except when the cold is very intense. For, as the New York papers were complaining in October, the porter who tends the stove knows no gradations of heat. To him, a fire is a fire; and when, at the first suspicion of winter, he is told to light one, he lights it and keeps it up just as zealously as if the thermometer were already 40° below zero. Then, say the New York papers, the passengers curse inwardly, and wish that it were always either July, when no fire is needed at all, or January, when the biggest fire that can be made is tolerable.

The car seats are comfortably cushioned with red or green velvet. The backs are padded in the same way, and are so arranged as to be reversible. This arrangement allows of all the passengers facing the engine, in whatever direction the train may be running. It also allows a party of two, or three, or four, to sit so as to face each other, just as passengers do in our compartments. But the weak point about the seats is the lowness of their backs, which do not reach the shoulder of a man of average height. The head is thus without that rest which the padded backs of our first-class and second-class carriages afford. I do not see how the backs can be made higher in the ordinary cars, unless the system of reversible backs were sacrificed. But there is no reason whatever, so far as I can see, why the backs of the seats in the Pullman cars should not be made a foot higher. For they are not required to be reversible. They are, in fact, fixtures, and when bed-time comes they are continued almost to the roof of the car by a moveable partition which is slid in above them. A foot of this partition, if not the whole of it, might just as well be added to the permanent backs of the seats.

Another institution of the American cars, which might be imported into England with advantage, if it could anyhow be adapted to our separate-compartment system, is the ice-water cistern. The American summers being hotter than ours, a water supply is an absolute necessity over there, and no car is without one, if I may judge from my own observation. The cistern, with a suitable drinking glass, or a small metal bowl hanging from a chain, is at the end of the car; and if the car is full of passengers, it has customers every two or three minutes. On some of the eastern lines, the accommodation is carried one step further—the water is carried through the cars, every half-hour or so, by a lad, who supplies glasses of it to all who ask as they sit. Drinking iced water is everywhere a great institution in America. Indeed, it is greatly overdone, and the Americans are said to impair their digestion seriously by it, for the water is taken into the stomach in a state of icy coldness, and in hot weather the dose is very frequently repeated. I may add that the ice-water cistern is not confined to the railway cars. It is to be found in waiting-rooms, public institutions, offices, hotels, and every place of public or semi-public resort, and is, in spite of its abuse, a source of great comfort and luxury. The "mashers" and other systematic London theatre-goers, who are accustomed to get their "nips" at the

theatre bars between the acts, would be considerably surprised, if they went to some of the American theatres, to find that the only drink available is iced water, carried round in glasses on a sort of large cruet-stand. It is, however, a fact that this was the state of affairs at more than one of the theatres I attended. I am, of course, not prepared to assert that nothing stronger than water is ever imbibed in the theatres or the cars, but it is certain that the use of any stronger liquor is exceptional. I had, on one occasion, unpleasant evidence that other liquors are sometimes introduced into the cars. I was travelling through California in a Pullman car on a very hot day, and one of my fellow-passengers, who was the happy owner of a bottle of ale (necessarily lukewarm on such a broiling day), slyly slipped the bottle into the top of the water cistern, which was half full of ice and formed a famous refrigerator. For some reason or other, the bottle broke, and the consequence was that we had nothing to drink but a very weak and insipid decoction of ale until we reached San Francisco. At Sacramento, we took up one of the Judges of the California State Courts, and he duly went to the common tap for a drink. Seeing that he eyed the glass rather curiously after taking the first mouthful, I told him of the accident to the bottle when he had finished his draught. "Well," he said, "I thought there was something wrong; but after all the stuff was wet and cold, and it was wetness and coolness that I was after."

There is a railed platform at each end of each car. This is reached by means of steps. The rear platform of one car is almost in contact with the forward platform of the next car, and it is, therefore, easy to walk through the whole length of the train; and this, as we shall see presently, the passengers and others are accustomed to do to an extent which is worrying in the extreme to unseasoned strangers. The cars are connected by a patent self-coupling apparatus, which is uncoupled, when necessary, from the platform by means of a lever. All danger in coupling is thus avoided.

THE PARLOUR CARS.

Most of the day trains on the principal lines contain a parlour car, a seat in which can be obtained by a payment of a very small sum (usually less than a farthing per mile) beyond the ordinary fare. On a long journey, this extra accommodation is cheap at the price, for the seats consist of sofas and revolving easy chairs, and there is ample room to walk up the centre of the car without interfering with anybody. The car is, moreover, nicely carpeted, furnished with a hassock for each passenger, and with spittoons for those who must or will spit. (More of this subject hereafter.) Each car is accompanied by an attendant, usually a negro or mulatto, whose services are at all times at the disposal of the passengers. The decorations are usually very handsome. The forests furnish ample supplies of various kinds of timber, and the sides and roofs of these parlour cars are usually lined with maple, walnut, and other woods, which are elaborately carved, and picked out in gilt and colour in a really artistic fashion. Where the lining is not of this kind, it consists of mirrors, some of them of very large size. The interior of some of the newest of these cars is, indeed, beautiful in the extreme. We can show nothing approaching it in England, except in the few cases in which Pullman cars have been introduced. These, like all the other cars, are carried on two end bogie carriages of the most massive and elaborate construction. With these bogies the body of the car is con-

nected by means of a pivot, so that, in spite of the immense length of the cars, they run freely round curves which would make an English railway engineer's hair stand on end. The car, in fact, stands across a sharp curve like the chord of an arc, while the bogies on which it is suspended are free to follow the bend without straining or mischief of any kind.

THE SLEEPING CAR.

The American sleeping car is the natural outcome of the country's geographical bigness. It is only in one direction that a railway journey from London need occupy more than a fairly long day. The one exception is, of course, the extreme North of Scotland, and the traffic between that remote region and the metropolis would not of itself have been sufficient to justify the running of sleeping coaches. "Sleepers" (to use the concise American name) are, as a matter of fact, now run on the main lines to the North of England and Scotland; but they have been put on solely for the benefit of those who, in order to save time or for other reasons, prefer to travel by night rather than by day. It was for a different reason that such coaches were first put on in America. There the distances are so great that thousands of people are constantly setting out on journeys which cannot possibly be accomplished in 12 or 15 hours, and which often extend to two, four, and even six days and nights. A traveller from New York to San Francisco cannot get over his 3,300 miles in much less than 140 hours, even by the quickest trains. He is travelling all that time, with the exception of the 20 or 30 minutes allowed three times a day for meals. Indeed, as far as Chicago or St. Louis, he can now go without leaving the cars at all; for the companies who work the lines to those cities are now running splendid dining cars, in which excellent meals are served, as the train travels, for about 3s (75 cents) per head. These cars are picked up at particular stations, and dropped at other stations an hour or two later.

But to return to the "sleeper." I met with two kinds—the Pullman and the Wagner. The Pullman is the commoner of the two; the great company presided over by Mr. Pullman, the inventor of the car, having obtained the right to run their cars over all the principal lines. A stranger entering a "sleeper" in the daytime notices that the seats, instead of having, like those of the ordinary car, reversible backs, so that all the passengers may face the engine, have fixed backs, and are arranged in pairs—one of the pair facing the other. They are, in fact, arranged just as the two seats in our English compartments are. There are 12 seats (six pairs) on each side of the car, with the usual passage down the middle. But instead of each seat containing two persons, it contains only one, although quite large enough for two. A car which, if seated in the usual way, would hold 64 persons, is thus devoted to the accommodation of only 24. Everyone, therefore, has ample elbow-room. Each passenger has at least three feet of beautifully cushioned seat, with padded back, all to himself, and with an electro-plated spittoon thrown in; and his opposite neighbour enjoys the same accommodation. The car is elegantly decorated, and the floor is covered with a handsome carpet. The windows are double, so that in winter the cold may be more effectually excluded. At one end there is a small retiring-room, with w.c., wash-basin, and other toilet requisites, for ladies. The gentlemen are similarly provided for at the opposite end, and they have a cosy little smoking-room besides. Handsome mirrors abound

in all parts of the car. If the backs of the seats were a foot higher and the windows opened differently, a "sleeper" would, by day, be all that the most exacting of passengers could demand.

But it is night—or rather evening; for society in the Pullman car retires early, knowing it may possibly be called at an "eating station" for breakfast by six in the morning. The negro or mulatto attendant, anxious to begin the last and most important of his day's tasks, walks through the car and casts his knowing eye upon all the passengers in turn. If he finds a pair engaged in card-playing or in lively conversation, he passes them by, concluding that they do not want to be put to bed just yet. But if he sees a solitary traveller dozing, or gazing with a bored and wearied expression out into the darkness, he asks: "Shall I fix you, cap'n?"—or "ma'am," as the case may be. The passenger answers with a sleepy "Yes!" and moves into a neighbouring seat for a few minutes, to give the darkie room to operate. If there is a second passenger in the section (the section consists of the pair of seats facing each other), he or she must clear out too. There must, indeed, be some sort of agreement between the pair as to when the bed-making business shall begin. It does not follow that both need retire at once; for, apart from the smoking-room, a seat may always be obtained for an hour on sufferance in some other section. The darkie begins by lifting off the two cushioned seats and dragging out of the depths beneath a couple of uncovered pillows and two short pieces of wood. The latter he places across the knee-space between the two seats, and puts the seats on them, drawing the padded backs (which are also moveable) down into the places which the two seats had previously occupied. A level, padded couch, about six feet long, is thus constructed of the two seats and the two backs. Jumping up on the edge of this couch, the attendant turns a handle in the sloping side of the roof, and lets down on a pair of hinges a whole panel of the carved roof, about the size of an ordinary door. This concern is simply a huge wooden flap, of whose existence the passenger has not hitherto dreamt, attached to the side of the car, just above the window, by its hinges; it drops until exactly level, and is so suspended by two chains attached to the roof. A wooden partition, reaching from the back of the seat to the roof, is slid in at each end of the section, and the section assumes the form of two berths, one about three feet above the other, exactly like a pair of berths at sea. The upper berth, when let down, is seen to contain all the materials (except the linen) for making up two beds. There are for each berth a thin mattress, a blanket or two, and a thick rug. There are, besides, two heavy and handsome rep or damask curtains. These the darkie in a twinkling strings upon a brass rod which extends the whole length of the roof of the car, and the two berths are thus secluded from the world—that is to say, as secluded as, according to American opinion, they need be. The bed-linen, which is never used a second time even for the same person, is brought from a closet in another part of the car. This making up of two beds is done in an incredibly short space of time. The attendants have evidently been carefully trained in every part of the operation. I watched them many times, and noticed that every item in the programme, down to the most insignificant movement, was done in every case in exactly the same order and exactly the same way.

Having "fixed" the occupants of one section, the attendant looks round to see if any other passengers are

ready for bed. When the process of retiring has once begun, it becomes infectious, and he has usually no difficulty in keeping himself occupied until all in the car are safely stowed away. He then turns the lights low, gathers up the boots that require cleaning, and retires to his own end of the car. All that is now visible of the body of the car is the narrow central passage, fenced in on both sides from end to end and from roof to floor by the curtains which conceal the berths from view.

The passenger who holds the upper-berth ticket has to climb to his (or her) roost as best he (or she)—these two sexes are a nuisance) can. If he happens to be a male (I don't see, by the way, how "he" can be anything else), he probably slips off his boots and kicks them under the lower berth, where he will find them clean in the morning, divests himself of his outer envelopes, and mounts to his berth in his shirt-sleeves. He must finish his undressing as best he can, sitting on his bed. If the passenger who shares the section with him has retired before him, and drawn the curtains well together, he cannot very well avoid separating them and stepping on the edge of the lower berth in mounting to his own. If the lower-berth passenger is a lady and he is a gentleman, he will, of course, manage this business properly, though I confess candidly I do not know exactly how to define "properly" in such a connection. He will, at any rate, not be more wanting in propriety than the guests of that famous backwoods "hotel" where there was only a single room for all-comers. In that case (so, at least, a veracious Western newspaper says) a chalk line was drawn across the middle of the floor. One side of the room was for ladies and the other side was for gentlemen; and it was a standing order of the house and a point of honour with the guests that *nobody* looked across the line.

I confess that, in this part of the subject, I am getting a little out of my depth; still, as I desire to be a full and faithful chronicler, I must persevere. The truth is, then, the proprieties of life are a good deal ignored in a sleeping-car, just as they are on board ship. If you happen to be travelling alone (I mean without a friend to share your section), you can never know with whom your lot may be cast. If you are a gentleman, you may have a lady either above or below you; and I suppose it follows, as a matter of course (or shall I say as a corollary?), that, if you are a lady, you may happen to share a section with a gentleman. As there are young and old, agreeable and disagreeable persons of both sexes, and as the occupants of the same section have to face each other all day as well as sleep one above the other all night, even a saint might be forgiven for having some preferences as to the kind of companion he is paired with. On one occasion, I was put in with a very prim, sharp-featured, angular-shouldered, stony-visaged lady of uncertain age—a New England spinster of the strong-minded sort, to all appearance. I had the ticket for the lower berth, which is usually preferred to the upper. I began to look forward rather sadly to the prospect of a night and a day in such company; but, fortunately, my companion soon discovered that the sole occupant of one of the other sections was a lady with a baby, and, to my great relief, she speedily got herself and her belongings transferred to the vacant berth. Perhaps I cannot better close my remarks on this part of my subject than in the words of the motto of the Most Noble Order of the Garter—"I will be to him that evil thinks!"

Babies! The mention of one of the blessed cherubs reminds me of another feature of life in a Pullman car. The babies, like the poor, are ever with you; at least, they were always with me. I came from San Francisco to St. Louis with babies—not the same innocents all the way, of course, but one baby or set of babies after another. Twenty-five hundred miles in a car with babies—one off and another or more on at each stage of the journey—is just about enough of that particular sort of thing. Americans evidently begin to travel very early—at the age of one month, I should say, on an average. And they are very lively fellow passengers, whether, in the daytime, they reach over the back of the seat and entangle their fat cherub hands (cherubs are fat, I take it, judging from pictures) in your few remaining locks, or, in the lonely watches of the night, mingle their voices with the hoarse shriek of the engine whistle or the tolling of the engine bell.

I love babies, of course—that is, good, moral, reasonable babies; but I confess that travelling a thousand miles with one is a severe test of one's affection. Seeing two or three "sleepers" on the same train on more than one occasion, I asked repeatedly why, in such a case, one of them was not reserved expressly for ladies and children. The reply was that the plan had been tried and did not answer; but what was the cause of the failure I could never learn. When children have to be cared for, and unprotected females provided with sleeping accommodation, the setting aside of a ladies' car appears to be the most natural thing in the world.

The charge for a berth in a Pullman sleeping car, including the companionship of the babies and of such adults as may happen to be quartered with you, averages about four dollars (say 16s 8d) for a night and a day. This charge is, of course, an addition to the ordinary train fare, a separate ticket being issued by the Pullman Car Company, who run the "sleepers" under an arrangement with the railroad companies. As the trains run 500 to 600 miles in the 24 hours, the extra charge for the berth is a little more than one-third of a penny per mile. As this payment secures double sitting space in an elegant car during the day, besides the bed at night, the use of a lavatory, and freedom from some of the principal annoyances that have to be endured in the ordinary cars, the price cannot be regarded as excessive. I might have mentioned, too, the convenience of having a darkie attendant always at hand to render any little needed service; but the truth is, the passenger is "expected" (in the same sense in which tips are "expected" in English hotels) to give this official a sum of not less than a quarter-dollar (1s) per night. This tip is the only one I gave on any railway. It is a recognised impost; indeed, it is said that the Pullman Car Company pay the attendants nothing, but leave them to "take it out" of the passengers.

My experience of sleeping in a "sleeper" is that it is a business to which one needs to serve an apprenticeship. At first, I could make nothing of it, but I was just beginning to know how to do it when it was time to come home. If I am to reap any advantage from my apprenticeship, I must go out again. The air space in the berths (especially the lower ones) is small; and, if the nights are warm, the want of ventilation is a good deal felt. American travellers appear to be proof against this and all other annoyances. They sleep as well as they do in their own beds—at least, so they say. My experience was different—very! As the cars usually run smoothly, I did not find that the mere

motion kept me awake. It was rather the occasional stopping that woke me. Still, even if one cannot sleep much, it is a very great relief to undress and get between the sheets. The monotony of a long journey is, indeed, pleasantly broken by the night's retirement. Between Sept. 3rd and 11th (eight days), I spent no less than seven nights in the cars, travelling during that time some 3,000 miles. In the next five days, I covered 1,200 or 1,300 miles more; but at the end of that time I felt wonderfully little fatigue or exhaustion—so little, as to be very much surprised.

I often wondered to see how apt the Americans are to neglect small matters, deeply affecting their comfort, while spending money most lavishly on mere appearances. Some of the sleeping cars afford remarkable illustrations of this habit. In some cases, where thousands of dollars have been spent on a car, and spent mainly in supplying elegant mirrors, in carving, gilding, polishing, and painting, with the object of producing a striking and pleasing effect, the traveller is astonished to see how many little conveniences are wanting—conveniences which would cost only a few cents, and would add immensely to the comfort of the occupants. Here is a case in point. Of all the "sleepers" I was in, there was not one whose lower berths were quite high enough to allow me to sit upright in them. They were all provokingly near the mark—so near it that, by drawing the head down between the shoulders, bending the back in an uncomfortable way, and telescoping the body together generally, I could just manage to sit and dress. But if, when so occupied, one happens to forget for a moment that there are obstructions between his head and the vault of heaven, and suddenly straightens himself up to obtain a little relief from his cramped position, he is promptly brought to his senses. For the chances are, that he raises his head sharply against the keen edge of a piece of elegant carving, cut out of the hardest wood that the American Continent produces. Unless his scalp is protected by a thick growth of hair, he may well fancy that he has split his skull; and he is, under any circumstances, more disposed to bestow left-handed blessings on the Pullman Car Company than to appreciate the beauty of their carving. Six inches more of height would remedy all this, and add unapeakably to the comfort of the occupant of the berth. After displaying such remarkable ingenuity as they have in so far perfecting the car, it would be absurd for the Pullman Company to plead that this half-foot cannot by any possibility be obtained. I think I see my way to securing it, without making the car higher or reducing the head-space in the upper berth; and if the clever people in that clever city of Chicago, who build these cars, really cannot see how it is to be done, and are not above taking a hint from a poor, used-up, old country like this, let them drop me a line and I will divulge my secret—for a consideration in dollars and cents, of course.

The berths in some of the newer "sleepers" have little shelves, closing with a spring, to take one's watch, collar, necktie, and other small articles of dress. They are also furnished with hooks on which the larger garments may be hung. The whole of these conveniences can probably be bought for a dollar. Nevertheless, I slept in two or three cars which were entirely without them, and in which I had to scatter all my clothes and other belongings about upon the bed as best I could. In little details of this kind, the Americans often fail conspicuously. The Pullman Car Company

could not do better than study the conveniences to be found in the cabins of the White Star steamers.

THE SPEED.

The average speed of the American trains is far below that attained in this country. The best average attained west of the Mississippi is about 30 miles an hour, and the trains which reach that speed are called "lightning expresses," "thunderbolts," and other names suggestive of a tremendous rush. Their average would be much higher but for the fact that they stop very frequently at wayside stations—partly because there are only one or two passenger trains daily, and partly because they have to pass numerous freight trains. East of the Missouri, the speed is greater. My first experience of anything like 60 miles an hour was gained on my return journey, between Kansas City and St. Louis; and the nearer I got to the great cities of the East, the oftener was this speed attained. Between Washington, Baltimore, Philadelphia, and New York, the service of trains is a very fine one, and the speed is at many points equal to that of our best English expresses. I went from Washington to Baltimore (40 miles) in 53 minutes, in spite of three stoppages and the usual tedious slowing over the numerous crossings in the neighbourhood of both cities. A few days earlier, a special train carried President Arthur over that same 49 miles in 41 minutes—a feat which could not be greatly surpassed even in this country. Between the Atlantic coast and Chicago, also, the speed is very great. The competition in that direction is exceedingly keen, the traveller having choice of three or four routes. By at least two of these routes (the New York Central and Lake Shore and the Pennsylvania), the distance of nearly 1,000 miles is accomplished in less than 25 hours. The trains run over 100 miles at a stretch, the engines taking up water, as they run, from shallow troughs, after the fashion of the London and North Western expresses.

THE NUMBER OF CLASSES.

Nothing is more common in this country than the notion that there is only one class of railway carriages in America. Many Americans encourage this delusion, in spite of patent facts, and with the object, apparently, of maintaining the character of their countrymen for consistency with their democratic principles. I have said enough already about ordinary cars, parlour cars, and sleeping cars to show that the common belief has no foundation in fact. But besides these three classes of cars, all the great trunk lines running westward have special cars for emigrants; some have reclining-chair cars; and on at least one western line I saw cars marked distinctly "second class." It is perfectly absurd for any American to declare that there is only one class. The word "class" is certainly not in ordinary use to describe the existing differences. But if the Americans have not the word, they have the thing itself, and it is a mere quibble on their part to represent their system of classes as essentially different from ours. The truth is, the rich and well-to-do may (as I have already described) purchase extra space, increased comfort, and a certain freedom from annoyance, which are out of the reach of their poorer fellow-travellers, precisely as they may and do in England. I do not know why any American should regard the class system as inconsistent with democratic institutions. A rich American does not refuse to live in a grand house and to eat costly food, merely because such luxuries are beyond the reach of his poorer countrymen. On the contrary, he is very lavish in

securing for himself all the advantages which his money can buy, whether in the matter of increased comfort in travelling or in any other way. In this respect, he does exactly what rich people do (and, up to a certain point, have a right to do) all the world over.

THE TICKET NUISANCE.

The train being open to the conductor (or guard) from end to end, all that relates to the examination, marking, and collecting of tickets is done as the train is running. In many respects, this is a very convenient arrangement, but it has its drawbacks. The conveniences are these:—There is no collection of tickets at the station gates, and the platforms are therefore ordinarily open to all. Further, a person can jump "aboard" at the very last moment without a ticket, knowing that the conductor can supply him with one. There are, indeed, many so-called "stations" out West without a single official to issue tickets or do anything else. I have seen "stations" which, so far as I could discover, consisted solely of a post bearing the name of the place. Any passenger who is taken up at one of these spots must necessarily get his ticket of the conductor. (I ought to have explained before now that the Americans almost invariably call a station a "depôt," pronouncing the word as if spelled "depo.") Now for the drawbacks of the ticket system. Whenever a train stops frequently in a thickly-peopled district, crowds of passengers are, of course, constantly getting in and out of the cars. The new-comers are distributed throughout the train, and it is impossible for a conductor, even if the owner of a patent memory of exceptional horse-power, to distinguish between them and the passengers who were in the cars before. The consequence is that, after every stoppage, he has to walk through the train and examine all the tickets; and on some of the eastern lines this incessant demand to see the tickets becomes perfectly exasperating. The worst case I met with was on the Boston and Albany line, about 200 miles in length. In that distance, my ticket was positively demanded, taken from me, perforated, and returned nine times. At last, having been awoken out of a pleasant doze two or three times, my stock of patience ran out to the last dregs, and I began to regard the conductor as an implacable personal enemy, as clearly beyond the pale of the law as the rattlesnake and the "grizzly." What would have happened to that conductor if he had returned the ticket to me after the tenth examination, I do not care to say—the truth is, I don't exactly know. Fortunately, he put the much-perforated thing—the "holy" thing, may I say?—into his pouch, and escaped alive into the next car. Out West, the ticket nuisance is not nearly so bad. The runs are longer, the conductor has more time to become acquainted with his through passengers, and the number getting in and out is small. Having once shown your ticket, you will sometimes not be troubled again until a fresh conductor takes charge of the train. If you are in a "sleeper," the Pullman attendant will hold your ticket and show it when necessary. On many lines, moreover, the conductor will supply you with a piece of coloured card, indicating that you are going the whole length of his section. This he will stick into your hat or into the back of your seat, where he can see it every time he passes through, and you will hear no more about your ticket while he remains in charge. Why the eastern lines do not adopt this or some such plan I am puzzled to know. I am

still more puzzled to understand why the Americans continue to tolerate so needlessly worrying a system as I have described. It is only fair to them to say that they are a patient and long-suffering people. If they were not, the post of conductor on some of their railways would be as dangerous as the task of a forlorn hope.

THE FARES.

The average fare in the States east of the Mississippi is about three cents (three halfpence) a mile. This, of course, is for a seat in an ordinary car. As already explained, extra payments have to be made for seats in parlour cars and berths in "sleepers." West of the Mississippi, the fares are higher, in some cases considerably. For instance, on the mountain lines of Colorado and Utah, which have been constructed at immense cost through thinly-peopled districts, the fares between some of the intermediate stations are as high as 10 cents (5d) per mile. In large cities, railroad tickets are sold at all the principal hotels, and at numerous offices belonging to the companies or to private speculators called "scalpers." The approaches to some of the busiest depôts are beset with the touts of these speculators, who lie in wait for persons who look like travellers, and offer through tickets to various points at reduced rates. An Englishman is amazed to find that there is apparently no such thing as a fixed fare between any one important point and another. In one sense, there is a fixed fare in every case—the fare charged when the ticket is bought at the station. But the traveller soon discovers that the station fare is in every case the *maximum*, and that, if he is about to take a long journey extending over several lines, his policy is to secure his ticket somewhere else. We will suppose (to take an extreme case) that he wants to go right across the continent, from New York to San Francisco. If he takes a through ticket at the station from which he starts, he will pay 135 dollars for it. But if he makes enquiries at the various ticket offices in New York, he will find the through ticket offered at various prices, ranging from 135 down to 123 dollars. Possibly there may be places where it can be got at a still cheaper rate, but 123 dollars was the lowest quotation I happened to hear of. I was long puzzled by these differences, and at last I asked a San Francisco agent to explain how they were brought about. His explanation was this:—"I am," he said, "the chief agent for California of the Chicago and Alton Railway, and I am also interested in sending traffic eastward over the lines of the Denver and Rio Grande and the Atchafson, Topeka, and Santa Fé. These three lines form parts of one of the competing routes to New York and the East generally. The lines of several other companies, with which I have no direct concern, make up the remainder of the route. The full fare to New York is 135 dollars. That is what you pay if you go to the Central Pacific depôt here, and take your ticket. But I can book you through, if you go by way of the three lines I am interested in, for 123 dollars. The difference of 12 dollars comes entirely out of the pockets of my three companies. In short, they make that reduction to ensure that the traffic goes their way, the other companies receiving their shares of the total 135 dollars without deduction." This explanation made the matter clear enough. But there are occasionally other and still wider differences in the fares when two competing companies happen to be more or less at war. While I was in the West, the lines which connect Chicago with

Kansas City, St. Louis, and Louisville were the scene of a short but sharp contest, in which three or four companies were involved. Each company charged the others with selling tickets, through "scalpers," at less than the standard fares. There were charges and denials of dishonourable conduct all round, and a good deal of dirty linen was washed in public. Day by day, the fares went down, until at last tickets were issued from Chicago to St. Louis (a distance of nearly 300 miles) for 1 dollar (6s 3d). This mad competition did not last long, but the public naturally made a rush to take advantage of it while it did last. My readers will gather from all this that a stranger who is travelling labours under serious disadvantages. Without much experience and great local knowledge, it is often impossible to make sure that one is not paying a great deal more than the *minimum* price for a ticket. The system of selling tickets in hotels and other places apart from the line is a convenience, no doubt; but the advantages are to a great extent counterbalanced by the impossibility of knowing when you have found what the Americans call "bottom prices."

CHAOS ABOLISHED.

Great Britain extends over so few degrees of longitude that the difference in the solar or natural time of her extreme eastern and extreme western points scarcely exceeds half-an-hour, and no real inconvenience is caused by the observance of London time all over the country. But the case of the United States is very different. The natural time of New York is more than three hours ahead of that of San Francisco; that is to say, the sun rises and sets more than three hours earlier in the former city than in the latter. It would obviously be very inconvenient to make so vast a country keep the time of any one place; there would, of course, be a great and awkward difference between the natural and the artificial time. The consequence is that, up to about two months ago, American "railway time" was chaos—the despair alike of officials and of travellers. In the same city—say, sometimes in the same station—two or three different companies, whose lines run out in different directions, observed as many different times. The same company, if its line was a long one running east and west, started its trains by the time of one place, stopped them at many stations by the time of some other place, and arranged for their arrival at the distant terminus by the natural time of that terminus. At some of the meeting-places of the trunk-lines, the confusion was simply maddening to a stranger, the evil being intensified by the difficulty—I might say the impossibility—of obtaining information from the station officials. I am glad to say the railroad companies have at last, since my return, come to an understanding among themselves and adopted something like a sane system. Seeing the impossibility of observing one uniform time over so vast an extent, they have adopted what is known as the hour system. Fifteen degrees of longitude represent exactly one hour of time. The country has accordingly been divided into three or four belts, each 15 degrees wide from east to west. The same time will be observed at all places within one of these belts; and as the time to be observed is the time of the exact centre of the belt, the natural time and the railway time will nowhere differ from each other more than half-an-hour. When it is twelve o'clock in No. 1 belt, containing New York and the other eastern cities, it will be eleven o'clock in all parts of Belt No. 2, (the belt next further west), ten o'clock in all parts

of Belt No. 3, and so on, going backward an hour for every 15 degrees. The advantages of this plan are obvious. The difference of time will in all cases be an exact hour, or exactly two or three hours, as the case may be; and every person with a fair knowledge of the geography of the country will be able to ascertain for himself (with a map, if not without) what time is observed in any particular place.

INFORMATION SCARCE.

I spoke just now of the difficulty of obtaining information at the railway stations. In many places that difficulty passes all belief. The time of departure, the position in the station of the required train, and many other facts which the stranger wants to know, are apparently close secrets. When I was at the Buffalo depot, one of the most important in the States, I could not find a single time-table in any part of the building. I asked the ticket clerk for one. He said his stock was exhausted, and asked me what train I wanted to go by. I told him that was the very question I wanted to settle by consulting a table. I wished to select from among several trains a good and quick one which suited my plans. Thinking there might be a time-table on the departure platform, I walked in that direction, but was stopped by an official, who told me I must get my ticket before passing the spot where he was posted. I had at last to buy my ticket without having obtained any definite information, beyond the bare starting time. The questions then arose—first, whether the train was to leave by New York time, by Buffalo time, or by Columbus time; secondly, which of those times the station clocks were supposed to be keeping. I could not satisfy myself on either of these points, and so I simply sat down and waited for the train. At Council Bluffs, a short transfer train carries westward-bound passengers over the Mississippi bridge to Omaha, where they enter the Union Pacific cars. When I and my companion arrived at Council Bluffs, it cost us an anxious tramp to and fro over the whole station, and an inquiry extending over 15 or 20 minutes, to ascertain with certainty which was the transfer train and at what time it crossed. There were few officials to be seen. Some of them returned to our inquiries the stereotyped reply, "I couldn't tell you!" Others took no notice whatever of our questions, while still another set flung a curt and unintelligible answer over their shoulders at us as they moved rapidly away. I had occasion at Cincinnati to run to one of the depots in haste to see a baggage agent who was leaving by a nine o'clock train. As I hurried through the ticket office, I noticed that the clock there was under the impression that it wanted six or seven minutes to nine, and I concluded I was in good time. Reaching the platform, I asked an official where the nine o'clock train was standing, and his reply was that it had gone 10 minutes. He pointed to a clock in the baggage-room which said it was several minutes past nine. "But," I said, "your ticket-office clock still wants five or six minutes to nine." This he refused at first to believe; but even when I had convinced him that such was the fact, he expressed no sort of surprise at the way in which things were managed. The very next night, I was starting from the same station for Washington, and after the lesson I had learnt, I took good care to be there half-an-hour before the advertised time of departure. Partly for amusement and partly to make myself doubly sure, I asked some porters, who were unloading mail-bags and baggage for my train, at what time it was due to

leave. One of them did not or would not know, and the other said he "guessed" it "generally" left at such-and-such a time (which was not the time of the timetable). I went from Cincinnati to Richmond (Indiana) to spend a day with an old Bridport friend. Before leaving the Richmond depot on my arrival, I inquired for the clock by which the trains were started, so that I might see how far it differed from my watch and arrange to be back in good time for my return train. I at last found a single clock, but an official whom I questioned admitted that that instrument bore no particular relation to the departure of the trains. On being pressed further, he "guessed" there was a clock upstairs by which the trains were dispatched, but it was in a private room or office where passengers could not see it. These are fair samples of the difficulties which beset travellers on many of the railways. It must not be supposed that my experience was in any way singular. I met many European travellers who had gone through precisely the same, and only last week the travelling correspondent of the *Daily News* wrote exactly as I am writing now. I cannot forbear from once more expressing my surprise that the travelling American public tolerate such a state of things. That they do so without serious protest is only one more proof that they are a very long-suffering people. But there may be too much of even so good a thing as patience, and in some matters the Americans undoubtedly manifest that virtue in excess.

THE BAGGAGE-CHECKING SYSTEM.

"Luggage" is a word entirely unknown in America. A traveller's belongings are there invariably called baggage. The American mode of "checking" baggage is entirely different from our system of labelling. In the first place, their plan is a tidier and more cleanly one than ours. Instead of sticking on three or four square inches of thin paper with a dab of stale paste or messy gum, and, by frequent repetitions of the dose, gradually defacing and dirtying the handsomest of trunks and portmanteaux, the American baggage man attaches a brass label by means of a leather strap. This label bears the name or number of the station to which the passenger is going, and the passenger is supplied with a duplicate label exactly like the first-named. The package is only delivered up on the production of this duplicate label; and as long as the passenger holds that label, he may rest assured that his baggage will not be got hold of by any thieves except those connected with the railway. The advantages of this system, apart from its tidiness, are obvious enough. In this country, every passenger must "claim" his luggage when the train reaches its terminus. He has no evidence to offer that he is the actual owner of what he claims; and if he is a nervous person, not much given to travelling, he may, when he sees the usual struggle going on round a mountain of baggage, worry himself seriously (and, I may add, unnecessarily) as to the chances of his property being claimed by somebody else. No traveller in America, who once understands the checking system, ever feels the slightest anxiety of this kind. If you are staying only a few hours in the town to which your baggage is checked, and do not want the baggage carried to your hotel, you have nothing to do but to walk out of the station the moment the train arrives, without giving yourself the smallest concern about your belongings. You may rest assured that, whenever you choose to resume your journey, you will find your trunk in the station baggage-room, and be allowed to take possession of it, or to check it on

another stage, on producing the duplicate brass label which was handed to you at starting. If you happen to have taken a ticket for a long journey, with the intention of "stopping over" (that is, breaking your journey) at various intermediate places, you may check your baggage on to various points. Any trunk which you are not likely to want till you reach your destination can be checked through at once, and you can claim it on your arrival. Other packages may be checked to and picked up at intermediate points. When a train is approaching a large town, the agent of an express or delivery company passes through the train and asks each passenger if he has any baggage to check for any one of the hotels (or, indeed, any other address) in that town. Those who wish their baggage thus delivered give him their addresses or the names of their hotels and hand him their baggage checks, in return for which he gives them his own company's checks. Within an hour or two of the arrival of the train, the baggage is duly delivered according to the instructions given. The charge for this service is sometimes monstrously high, as we shall see presently, but the convenience of the arrangement is beyond dispute. Although the checking system may occasionally fail, as any system worked by fallible humanity is bound sometimes to do, I certainly wonder the English companies have not long since adopted some such arrangement. Their reason probably is that the existing English system is not, in actual practice, so utterly absurd as it looks; and that much must be conceded.

It happened that, in my case, the checking system failed twice in the very same week. On our approaching Cincinnati, the express man came through the car as usual, and both my friend and I checked part of our baggage for the Burnett House Hotel. My friend's trunk was duly delivered at that hotel within an hour of our arrival, but my own was missing. After a long hunt for it at the station and at the office of the express company, and after telephoning for it to other parts of the city, I had to "give it up" and go to bed. Some time in the small hours, a porter woke me to tell me that the missing portmanteau had, after all, been found at the depot. A few days later, I was leaving Washington for Baltimore, and my baggage was duly checked in the hall of the Washington hotel. The express van, however, went to the station without it, and it had to follow me by a later train. Two such failures of the checking system in a single week, in the experience of a single person, are, I think, very uncommon. Indeed, several American gentlemen, to whom I described my experience, declared that it was unprecedented. This I can readily believe; for if there is a bit of bad luck going about the continent I happen to be in, and looking for a suitable resting-place, it is pretty sure to take up its quarters with me.

BAGGAGE SMASHERS.

Nothing less than inspiration can enable me to do justice to this theme, and I shall infallibly make a mess of it unless all the deities that preside over the pen-and-ink business forthwith come to my aid. There were several things which the writer of the latter part of the Book of Proverbs said were beyond his comprehension, though I have always thought, as regards some of them, that a man of his large experience was unnecessarily diffident. But I am sure that, if the writer had lived in our days, he would have added "the way of a railway porter with a trunk" to his list of the things which he could not understand. There is a good deal more of the incompre-

hensible about that than about some of the things he professed ignorance of. I confess that, up to about the end of last July, I had been in the habit of regarding the English porter as incarnate mischief, the chief end of whose existence was to destroy passengers' luggage and to provoke its owners to wrath. But I have changed my opinion since the period aforesaid. I now regard the English porter as the gentlest, most careful, and most considerate of mortals, and I shall never complain of him again, no never—until I change my mind. This revolution in my views has been brought about by contact with the American porter—the "baggage smasher," as the newspapers long ago dubbed him. In the art of destruction, he has not, never has had, never can have, a rival. In his vocabulary, the word "trunk" means "a thing to be battered, smashed, destroyed." He is past master of all the cunning devices by which the one object of his life may be attained. Opportunities of bringing down a ponderous case, containing a hardware drummer's samples, plump upon a fragile trunk, of thrusting the iron-clad corner of one trunk into the weakest part of the side of another, and of playing a vast variety of similar pranks, are to be met with every hour of the day, and the smasher never loses a chance. His rule is to shoulder off as much of his duty as possible upon the over-worked and much-to-be-pitied law of gravitation. His motto is: "Never lift down what can be made to fall." When a baggage car is being loaded, the smashers cannot very well help exerting themselves a little, for they have not yet discovered a way of inducing gravitation to pick trunks up from the barrows and platforms and stow them away in the cars. But when they have to unload a car, they take a sweet revenge for all the trouble they have been put to in loading. The floors of the cars are very high—almost level with the eye of a man of moderate height. The so-called platform, on the other hand, is usually quite level with the rails, and the huge baggage barrow or truck is certainly not more than two feet high. As, moreover, the trunks are often piled to a considerable height inside the car, the smasher has usually ready to his hand the first essential of success—a good deep drop for the objects of his vengeance. We will suppose that a train has just reached an important depot, and that the baggage cars contain a good deal of baggage for that particular place. The large sliding doors in one of the cars are run back, the station truck is backed up under the opening, and the work of destruction begins. Possibly, the top trunk of the pile is as high as the head of a man standing in the car. The higher the better, because the greater the fall, and therefore the more absolute the certainty that the trunk will be smashed and its contents laid open to baggage-room thieves. By dint of long practice, the smasher has arrived at perfection in the art of delivering over the various pieces of baggage to the tender mercies of the law of gravitation, with the smallest possible effort to himself. Seizing the top trunk by one corner, he tips it, with one clever twist of his wrist, towards the precipice at the bottom of which stands the truck. His labour consists (to put the thing into scientific jargon) in so far turning the trunk over, that the perpendicular from its centre of gravity is just over the line of its base.

That self-same law which moulds a tear
And bids it trickle from its source—
That law preserves the earth a sphere,
And guides the planets in their course.

It also brings down that trunk on that station barrow.

If the trunk happens to be made of half-inch boiler-plate, of a really good brand, the chances are that it is not itself seriously injured; but it is pretty certain that anything fragile which may be inside is hopelessly damaged, even if it is rolled up in all the owner's dirty linen and packed in the very centre of the box. But the best fun for the smashers comes in when the first trunk is a light and rather weak one, and the second is a drummer's (commercial traveller's) sample case, duly prepared, by means of heavy iron clamps on all corners and edges, to take either the offensive or the defensive. In this case, the smash is as certain and as complete as when an elephant sits down on a hand-box. Nobody can stand and watch a party of officials unloading baggage in this fashion without feeling an almost uncontrollable desire to go round and administer a vigorous kick to them all in turn. Their mischievousness is of so cynical and gratuitous a kind that it is difficult to believe they are not all in the secret pay of the trunk-makers;—speaking of whom, by the bye, reminds me that I was astonished at their number and the extent of their business, until I saw how the porters were everywhere doing their level best to send them customers. If the porters are not bribed by the trunk-makers, I see no way of explaining their deliberately mischievous doings, except on a theory which can only be expressed in Americanese—viz., that their conduct must be due to "pure cussedness."

A TALE OF A TRUNK.

I have so far dealt with the baggage-smasher and his diabolical works generally. Let us come to particulars. Before leaving home, I asked a leading ironmonger what he could recommend in the way of trunks for such a journey as mine. He showed me an iron box intended specially for Indian travellers, and therefore called the "Suez Trunk." It looked all right. I sat upon it, jumped upon it, tried to twist the hinges, and in various other ways subjected it to what I regarded as reasonable tests. But I had not then been to the right market for experience. If anybody were to offer me such a trunk now for a similar purpose, I should ask:—"Has Jumbo ever sat on it, with darling Alice in his lap? Has it been tested in a hydraulic press till the cylinder burst? Has it been fired out of an 81-ton gun against a 16-inch armour-plate? Will you take back the pieces, at a small reduction from the original price, if, after all, the smashers break it up? If you answer all these questions in the affirmative, I may possibly risk having it." But, innocent that I was, I bought the trunk without asking all this. Our gentle English porters, awed perhaps by its gorgeous appearance (it was painted a bright yellow), took it up tenderly and laid it down with care. So did the steam-boat people. But before I had made more than two or three railway journeys on the other side, its splendour was a good deal dimmed. The smashers, perhaps, had heard Oscar Wilde lecture, and objected to primitive colours. Anyhow, they soon began to knock off the yellow paint; but, what was more serious, the trunk was before long so battered and twisted out of shape that locking and unlocking became difficult. By the time I reached Denver (I did not carry it further west), it had assumed somewhat the appearance of an old tin kettle which has been kicked about the streets for a week. The jointed piece of brass which goes into the lock (I forget the name of the thing) had been twisted off; and a Denver brazier, who no doubt combines (on his trade card) "careful workmanship" with "moderate charges," was good enough to

solder it on for a dollar (4s 2d). It is only fair to this obliging tradesman to say that a dollar was possibly a moderate charge according to the local standard, for a dollar does not go far in anything out there—except in the pockets of travellers. On my return journey eastward, the poor trunk's condition grew worse and worse at every stage, and I began to question seriously whether I should ever get it back to the coast. I just managed to do so, and that was all. When it turned up at the Fifth Avenue Hotel at New York, it was in a state of literal and absolute collapse. Some smasher had given it a finishing stroke, apparently by dumping an ironclad monster of a case down on it. It was like a hat that has been sat upon. The lock had been destroyed; and, there being then nothing but a strap between the smashers and my personal belongings, somebody had appropriated my best black full-dress felt hat. I had to give five dollars (a guinea) for another, before I was in a condition to wait upon the President, Mr. Vanderbilt, Mr. Jay Gould, Mrs. Langtry, Lord Chief Justice Coleridge, O'Donovan Rossa, and all the other celebrities who might be burning to see me. Hats, like most other things of American manufacture, were, I found, about double the English prices. A leather portmanteau which I had with me was in almost as pitiable a condition as the trunk. Its lock, also, was smashed. I had lost my keys of both trunk and portmanteau, and as I neared New York, I began to wonder how I was to get them open without a locksmith's aid. But the railway smashers had saved me all trouble on that score. Before leaving New York, I bought a regulation American trunk, duly armed at all points with iron. I gave the mortal remains of the "Suez" to the head porter of the hotel, suggesting with some little diffidence that he might, perhaps, find it useful; but his countenance said most eloquently: "I ought to have a half-dollar for the trouble of giving that thing decent burial;" and he ultimately had the money.

AMERICAN *versus* ENGLISH TRAVELLING.—THE VERDICT.

The American railway system is, no doubt, on the whole, adapted to the peculiarities of the country and the habits and temperament of the people; but I should be sorry to see it introduced, as a whole, into England. As I have before said, there are certain of its features which, if they could be only grafted upon our system, would add immensely to the comfort of travelling. But if I had to choose (for a day journey, of course,) between the ordinary American car and the newest second-class carriages of our Great Western or South Western line, I should without hesitation vote for the latter. The average car is, no doubt, the handsomer, loftier, and more imposing vehicle. But for real comfort, quiet, and retirement, it is nowhere in the comparison. In the first place, the opening and shutting of the windows are entirely beyond the control of any one passenger, however necessary it may be for him to avoid draughts. There are thirty or more windows, and each is under the control of a separate person. A delicate passenger may shut his own window, and even induce his next neighbour to shut his; but other win lows, further ahead, are out of his reach, and he will feel the draught from them as effectually as if he sat nearer. In this important respect, the balance of advantage is with us. Again, it is no doubt very pleasant to feel free to walk at will up and down the car, and to wander from car to car as fancy may dictate. But this convenience is attended by very serious drawbacks. There is literally no peace for the passengers

who sit near the ends of the cars, for the doors are being opened and shut "all the time," to use the American phrase. The eternal slamming of those doors is, indeed, maddening to any tired strangers who have not yet got hardened against the nuisance. I use the word "slamming" advisedly, because, so far as my experience goes, it is a very rare circumstance indeed for an American railway traveller or official to take hold of the handle of a door and shut it gently. The rule is to throw it from the hand with as much force as possible. I was frequently aroused with a start from a quiet snooze by what appeared like a pistol-shot, but what proved to be "only the door." Even in the parlour cars, where one is supposed to obtain a little extra comfort, this nuisance sometimes reaches aggravating proportions. One day, when we were sitting near the end of a parlour car, my travelling friend amused himself by keeping account of the number of times the door was opened and shut, and he found it to average just twice in every three minutes for the first three-quarters of an hour. I am reminded at this point that I have not yet introduced my readers to

THE BOOK FIEND;

and as that personage is largely responsible for the annoyances I have described, I had better at once trot him out. There is nothing specially diabolical about his look. He certainly has no horns; and if he possesses any tail, he must keep that appendage carefully coiled up inside his clothes, for I failed to discover any trace of it. And yet the newspapers often refer to him as "The Book Fiend," "The Candy Demon," and so on. Why is this? Let us see.

The American railway companies sell the right to "peddle" (American word) newspapers, books, fruit, sweets, &c., in their cars, just as our own companies sell to Messrs. Smith & Son or some other firm the monopoly of carrying on a similar business at their stations. The American news companies employ lads or young men as their agents, and one of these is to be found on almost every train. A place for his stock-in-trade is provided in the baggage-car, and thence he sets forth about fifty times a day to walk through the train in search of customers. In moderation, he would be a very useful institution; but there is a great deal too much of him. He deals in, perhaps, twenty different articles, but he has a trick of never offering more than one thing at a time. First, and as soon as the train starts, he carries newspapers through the cars, asking for these, in very many cases, from 50 to 100 per cent. more than the published price. This, by the way, is a common practice in all parts of the States and Canada. Having fully satiated the appetite for news, he brings a load of other literature—magazines, pamphlets, and books. Of these he has a large variety. Without saying a word, he dumps down on the seat beside you a volume of orthodox sermons, a collection of Ingersoll's heretical sayings, a copy of Peck's "Bad Boy's Diary," and "A Thousand Conundrums." Here is something for all tastes. As a rule, the books thus supplied are badly printed on coarse thick paper and are very dear. In a few minutes, the boy returns from his journey to the tail end of the train, and takes your money for such book or books as you may have selected. The mind of the train having been thus duly provided for, he begins to think of the passengers' bodies. First he brings (if the season is right) a basket of very fine pears, three of which he handsomely offers to sell you for a quarter-dollar (1s). On his next journey, he brings candy, then apples or oranges,

then grapes, then pea-nuts, then a sort of walnut ready cracked, and so on *ad infinitum*. I have seen him pass through the car eight times, with eight different kinds of wares, within the space of a single hour. And each complete journey to and fro means, of course, four bangs of the door, or thirty-two bangs in the hour. I once asked a decent-looking book boy on a Michigan Central train to be good enough to shut the doors gently if he must come through the car so often. I reminded him that there might be sick, or tired, or nervous people in the train to whom the everlasting slamming might be torture. The lad looked at me as if a new revelation had burst upon his astonished vision, and it was perfectly clear to me that it had never before entered his head, or been suggested to him, that his noises might possibly be disagreeable. He was a well-disposed lad; and having fairly realised that what I had said might be true, he presently came to me spontaneously and promised that he would attend to my request.

The newspaper boy is no doubt the chief disturber of the peace in the ordinary cars, but he is not the only one, and perhaps I cannot convey a clearer idea of the extent and character of the disturbances than by means of a sample. Here, then, is a sort of time-table of an American car:—

12.0—Train starts.

12.2—Several persons, carrying their lighter baggage, come in from the next car in search of seats. Some settle down in vacant places; others try their luck further on.

12.4—Boy with newspapers.

12.6—Conductor comes through to examine tickets.

12.8—Passenger A, hungry for a "weed," goes into smoking car.

12.10—Newspaper boy returns.

12.12—Conductor does ditto.

12.14—Passenger B loafs through—in at one door, out at the other—for no apparent reason.

12.16—Brakesman does the same.

12.18—Boy with books.

12.20—Brakesman loafs back again.

12.22—Passenger B follows his example.

12.24—Conductor opens the door, looks in, and slams it again.

12.26—Boy returns with books.

12.28—Passenger C walks through.

12.30—Train stops at a station.

12.32—Same as 12.2 over again.

12.34—Conductor again punches tickets.

12.36—Boy with candy.

Every two minutes } Repetition of one or other of the
for the rest } above-mentioned movements.
of the journey.

I wish to guard myself against being supposed to say that there is no set-off to all this incessant movement and noise. It is certain, for instance, that individual passengers are safer from assault in these huge cars than they can ever be in our small compartments. In some of the more lawless districts, it would be simply putting a premium on robbery and violence to run carriages constructed on the English system. The presence of many in the car constitutes the safety of each. This is true, at any rate, as regards such assaults on individual passengers as sometimes happen in this country, and as would happen far oftener in America under similar circumstances. But I am not sure that the boot is not on the other leg as regards those attacks on trains by organized bands of desperadoes which sometimes happen in the Far West.

One or two desperate men, with revolvers levelled at the passengers' heads and with the cry "Hands up!" have often overawed a whole car-full of persons and paralyzed all resistance, while an armed confederate went round and made a "collection" of the money and watches of the passengers. If these passengers were distributed through a dozen or twenty compartments, the few ruffians could not thus overawe all at once; and the chances are that, if they attempted to take the compartments in detail, they would find themselves taken in flank and rear by those passengers who, for the moment, were free from their attentions. As regards the safety of passengers from attack and robbery, the car system has, however, the advantage on the whole.

It must, moreover, be admitted that the right to pass from car to car and occasionally to stand on the platform is a valuable one; and if it were only used carefully and in moderation, nobody would complain. I have myself stood for hours on the car platform when passing through grand mountain or river scenery, and have on such occasions been very thankful for the liberty so to do. On some of the mountain lines of Colorado and Utah, open "observation cars" are attached to the trains at the most romantic points, and the passengers are able to walk to and fro between these and the ordinary cars at pleasure as the train is running. Without such open cars, it would be impossible to obtain any clear conception of the grandeur and prodigious depth of the numerous gorges or canons through which these lines have been carried.

The Americans are very proud of their railway system, as they have ample reason to be; but some of them are a little too impatient of criticism. These (they are fortunately a minority) appear to regard the national travelling arrangements as "given by inspiration." Nobody may question their absolute perfection. The railway system is a sort of ark of the covenant, which no rude foreign hand may touch. It happens, moreover, that the people who are thus so over-sensitive to criticism are the very people who invite it and insist on having it. The moment they discover that they are in the company of an Englishman who has seen a good deal of the country, they begin to question him about the railways, and are not satisfied until they have dragged his opinion out of him. They are sometimes far from satisfied even then—supposing the Englishman has the audacity to declare that he prefers the English system to theirs.

I FIGHT IT OUT.

I met with a number of Americans of this class, and I will try to convey some idea of a discussion I had with one of them. I arrived at Kansas City from Denver after a journey of 23 hours, and, after less than half-an-hour's stoppage, started by another train for St. Louis, a night run of 12 hours more. I had had some trouble with the conductor and the station officials about a seat to which I was entitled in a reclining-chair car, and I was not at the moment in a suitable frame of mind to do more than the barest justice to any existing American institution. It so happened that, soon after leaving Kansas City, I found that an American gentleman and myself were the sole occupants of the little smoking saloon at the end of the car. I beg to remark that I was not put there because I wanted to smoke, smoking being an accomplishment which I have never yet mastered, but simply in order that I might be at hand to pop into a reclining-chair that was to be vacated within an hour or two. My companion,

having first put an impenetrable cloud between him and myself, proceeded to cross-question me. He, of course, discovered immediately that I hailed from this little island, and before many minutes had passed, he knew exactly where I had been. Then he began to ask for my opinion about the country and its institutions. In spite of the recent wrangle about my seat, I felt sufficiently amiable to remark that the country was a large one. This gratified him, for every American appears to regard such an admission as a personal compliment. But when his cross-examination of me began to relate to the railways, and I expressed my opinion with perfect frankness, praising where I thought praise was due, and dealing out censure with regard to what I considered defects, my companion became visibly irritated, and his irritation presently began to affect his natural courtesy. I spoke just as I have here written about the want of quiet and seclusion in the cars, when he interrupted me by saying rather impetuously—

"I suppose, then, you like to be boxed up and locked in, in such a way that you may be assaulted, robbed, murdered, smashed up, or burnt to death, without a chance of escape?"

"If," I replied, "you refer to the English railways, and suppose that we are really locked in in the manner you describe, I beg to assure you that you are mistaken as to the facts. We are not so locked in."

"Oh! but you are," he exclaimed, somewhat rudely.

"Have you been in England?" I asked.

"No," he said; "I have not."

"Why, then," I asked, "are you so positive in your statements?"

"Because, although I have not been myself, I have friends who have, and I have read what a good many other visitors to Europe have written on the subject. They all agree in saying that English railway travellers are everywhere locked in, in such a way that there is no escape for them."

"I have lived in England all my life," I replied. "I have been in every English county and on almost every railway in Great Britain; and I tell you again, speaking from my own personal observation and knowledge, that you have been misinformed. I am aware that your countrymen always say just what you have said on this very subject, and this is how the general misapprehension has arisen:—Our railways being almost always double lines, the carriage doors on the side of the train most distant from the platforms are always locked. This is a most necessary precaution. If the doors on that side were left unlocked, stupid people and those with defective sight would be constantly stepping out upon the other track and getting killed. Here and there, mainly at junctions, the platforms are on what I may call the wrong side, and it is in the neighbourhood of these places that both doors are sometimes locked for a short time. But these occasions are rare. I may add, moreover, that if a sudden necessity arose to clear the train quickly, I would rather take my chance of clambering out of one of our carriage windows than of escaping by one of your car doors, which, with the narrow approaches, would certainly be blocked by a struggling crowd in case of a panic."

Finding that there was nothing more to be said on this subject, my companion started on another tack, and contrasted the American system of warming the cars by means of stoves or steam pipes with our plan of using what he called "little hot-water bottles." That a couple of our foot-warmer could be of any service in a small, snug compartment, was a thing which

he could not bring himself to admit, although I explained to him that the severity of our winters was not to be judged by the extreme and protracted cold of an American winter. I confess I could not speak very enthusiastically of our rather clumsy and unscientific method, but I felt that I was on my mettle, and bound to make as good a fight as I could "for England, home, and beauty"—that is the correct patriotic sentiment, is it not?

But my companion was determined to carry the war into the enemy's country (that's our country) as far as possible and to the best of his ability, and he accordingly began to ridicule our baggage arrangements. Here he thought he "had" me beyond all manner of doubt. He had heard of our plan of labelling, and of our system (if such it can be called) of claiming our luggage at the end of our journeys; and he had rashly, though perhaps naturally, assumed that thieves were hourly claiming packages which did not belong to them, that baggage was constantly being lost, and that the owners had no remedy whatever against either the railway company or anybody else. With this no-system he contrasted the safety, certainty, and convenience of the check system which I described last week, and he evidently thought I was now effectually shut up. But I wasn't, for I felt that "the eyes of England" were on me, that "England expected every man to do his duty," and all the other fine national sentiments. So I made bold to remark that, though our system might, in theory, appear idiotic enough, it, nevertheless, worked fairly well. It was true that, in theory, anybody was free to claim anybody else's baggage; but, as a matter of fact, this was seldom done, and still more seldom done with any success. Begging the gentleman's pardon for taking the liberty, I asked him to suppose that he was a thief, intent on carrying off a nice promising trunk or portmanteau. "How would you know," I said, "that the person standing next to you was not the rightful owner, who would instantly give you into custody on your attempting to carry off his property?" This view of the case had evidently not occurred to the American, and I proceeded to assure him that the circumstances I had described, combined with others, tended to render baggage almost perfectly safe even in England. Unfortunately, my own experience of the occasional failure of the boasted check system had not then been acquired. Had the conversation taken place a week later, I should have been in a position to demolish my opponent utterly. As it was, I surprised him further by assuring him that, even in the absence of all checking arrangements, the English companies were just as much responsible as the American companies for the safe delivery of all baggage which could be proved to have been delivered to them.

Finally, I let loose my reserve forces and fired my biggest gun. "How about your baggage-smashers?" I demanded triumphantly, and my opponent instantly surrendered unconditionally. On that one point, he had not a word to say, except to admit that there was nothing to be said. This, indeed, is the one point on which all Americans, and all Englishmen, and the whole world are agreed. Many Americans strenuously defend every part of their travelling arrangements except the systematic destruction of their baggage. Patient and easy-going as they are, they feel impelled to use strong language about this. The misfortune is that their expletives appear to be as powerless, either for good or for harm, as the clerical curses that were bestowed upon the Jackdaw of Rheims. Nobody is one penny the worse—or the better.

I met with another illustration of the remarkable sensitiveness of certain Americans to all unfavourable criticism of their travelling system on my voyage home. I was one day discussing the matter with an American gentleman from St. Paul, Minnesota, who entirely agreed with me as to the defects I have described. Another American—a young man—who was sitting near us, listened attentively to our conversation, and presently he said, in the hearing of my travelling companion:—"Why doesn't that fellow" (the Minnesota gentleman) "stick up for his country? I guess I'd give it to that Englishman" (myself) "if I had him in hand. Nervous people have no business over here; they should stay at home."

It is clear, I think, that the noises and worries of travelling, which detract so seriously from the comfort of Europeans, are altogether unnoticed by the majority of seasoned American travellers. Many of them declared to me that they never noticed the annoyances. Others laughed at my complaints, and some even said they liked the newspaper boys to come in and out, because they "kept things lively." This last statement is one which it is impossible to controvert; the boys do undoubtedly "keep things lively."

SUNDRY MATTERS.

The trains are usually made up with the baggage car or cars immediately behind the engine, then the mail car, the smoking car, the ordinary cars, and the parlour cars or "sleepers," or both, at the rear. The occupants of the parlour cars and "sleepers" have right of way through the whole of the passenger cars. The occupants of an ordinary car can walk through all the cars of the same class, but have no right in the parlour and sleeping cars. In case of necessity, a passenger can gain access to the baggage car, and representing his baggage check (of which more presently) can open his trunk or portmanteau. This is a great convenience.

The number of officials on a long trunk-line train is large, judged by the European standard. Besides the engineer and fireman, there are a "baggage-master," sometimes with one or two assistants; the travelling post-office clerks, if there is a mail car, as there usually is; a conductor, with an assistant known as the porter or the brakeman; a Pullman conductor, whenever there are parlour or sleeping cars on; and a black or mulatto attendant for each of such cars. A train containing two or three baggage-cars, a mail-car, and three "sleepers" may thus have as many as 12 or 15 officials travelling with it.

The trains are apparently all fitted with continuous vacuum or atmospheric brakes, and the engineers thus have them under perfect control, long and heavy as they usually are.

The American plan of calling out the names of the stations is one which could not be adapted to our system. Just before the train reaches the stopping-place, the conductor or brakeman passes through all the cars and calls out the name of the place. Sometimes he does it well, sometimes badly. He is, in this respect, very much like his English brethren. He is generally understood by those who are familiar with the line, but a stranger is seldom able to make anything of what he says. This is pretty much as it is in England. I have heard American conductors make a really conscientious and not unsuccessful effort to render their call comprehensible even to strangers; but I have also seen others walk quickly through the car, without raising the head or affording the slightest hint that they were addressing

the passengers, and I have seen their lips move and heard a faint muttering as if they were making some confidential remark to themselves. The only safe plan for a stranger is to keep a sharp look-out for himself. If he trusts to information which he thinks the officials ought to impart at the proper moment, he is pretty sure to go wrong. Out in the West, there is often no pretence at calling out the names of the numerous small wayside stations, and it is sometimes a matter of difficulty to learn where one is, unless one happens to be well supplied with time-tables and maps. Most of the passengers are travelling long distances, if not "through;" and as few of them want to alight at the wayside stations, the officials apparently think it would be an absurd waste of good breath to tell them where they are.

AT QUEBEC AND THEREABOUT.

It was nearly midnight and intensely dark when the *Parisian* reached Quebec. Wide as the St. Lawrence is, the manoeuvring upon it of so vast a structure as an Allan liner is a business demanding great caution, even in the day-time. At night, it is a still more ticklish matter; and the process of getting alongside the quay appeared tedious in the extreme. At last, however, we were safely moored to a timber-built wharf at Point Lévis, on the opposite side of the river to Quebec. Then we went to bed—to bed, but not to sleep. We had fondly hoped that, as the monster engines were at last at rest, we should have an undisturbed night; but this was not to be. As ill luck would have it, some of the pipes by which the boilers discharged their water and steam passed immediately under our cabin, and a discharge of some sort was going on for hours at a stretch. Those who know the kind of noise which steam, or hot water under pressure, produces when discharged into cold water will readily appreciate the hideous concert which some of those engineer fellows kept up for our benefit nearly all night. However, we were impatient to tread the soil of the New World, and we turned out early.

A WOODEN WORLD.

"What a very wooden world this New World is!" Such was my first impression. Wood was the only thing visible in the immediate neighbourhood of the wharf. As I have already stated, the wharf itself was of timber. Close alongside it were a wooden custom-house, a wooden emigrant dépôt, and a wooden railway-station. Running along the river-side, from the station to the ferry landing-place, was a straggling street of wooden houses, having wooden sidewalks (the Americans never say "footpath"), and here and there wooden crossings for the benefit of those who might want to get from one side to the other of the track of deep, black mud which constituted the roadway. Even the mud consisted largely of disintegrated timber, as I found, in due time, was the case in all cities where wood is largely used in the streets and footways.

THE ST. LAWRENCE.

The St. Lawrence is at least a mile wide at Quebec, and the view of the city, as we looked at it across that splendid stream in the early morning, was superb. "Beautiful for situation; the joy of the whole earth!" was my verdict as we first set eyes on it in the daylight. The verdict was borrowed from a far-off land and time, but it was to the point, and saved me the trouble of "finding" an original one.

And so this vast stream which rushes along between me and the city, glistening in the morning sunshine, is the St. Lawrence! Here, then, are the surplus waters of Superior and Michigan, of Huron, Erie, and Ontario—that peerless group of fresh water seas. And here, too (for the prose of the artificial will somehow intrude on the poetry of the natural) flows oceanwards the sewage of Chicago, of Milwaukee, of Detroit, of Cleveland, of Buffalo, and of many a famous city besides. It is, however, satisfactory to know that in such a prodigious mass of water as this, flowing, as it does, many hundreds of miles, the sewage of the largest existing cities could produce no appreciable defilement. Some of this water fell in rain more than 2,000 miles away to the north-west, amid the unexplored forests which drain into Lake Superior. Part of it hails from the highlands of Minnesota and Wisconsin; and if some of it had only fallen 100 yards further west, it would have flowed into the Mississippi, and so to the Gulf of Mexico, instead of hurrying down here past Quebec to the Atlantic. Here, in short, is the drainage of parts of half-a-dozen great American States, and of nearly the whole of the Canadian Dominion westward to the borders of Manitoba. This vast volume of water has, moreover, had a romantic journey. It has leaped Niagara, and lashed itself into fury in the narrow, rocky, tortuous gorge which forms the exit from that stupendous cataract. It has glided noiselessly amid the thousand channels of the Thousand Islands, and danced merrily down the series of famous rapids which ends at Montreal. Hence to the ocean its course is peaceful and uneventful. It gradually broadens out, and becomes more and more distinctly briny in flavour, until it is at last absurd to regard it any longer as a river; but it is as impossible to say exactly where river ends and sea begins as it is to say when childhood verges into youth or youth into manhood.

A NICE QUESTION FOR THE CUSTOMS OFFICIALS.

But we must come down for a time from Nature to Man. Nature may make great rivers, but she never levies import duties; and, lo! here is a custom-house, and here are the agents of the Dominion of Canada curious to know what we have in our trunks. I duly open mine and await the good pleasure of the officials. Canada, I am sorry to say, has almost as absurd a tariff as the United States; but I have not time at this moment to demonstrate its absurdity, and we will, if you please, bide that for granted, till we meet with some rabid Protectionist whom it may be worth while to try to convert from the error of his ways. In due time, an officer began to pay his attentions to me. He was not very young, and apparently not disposed to take much trouble. Instead of searching the open trunks, he catechised me. Had I anything to declare? he asked.

"Your list of dutiable articles is so long," I said, "that I cannot pretend to reply with certainty; but the only article I have any doubt about is an old gold watch which is in that trunk."

"Why didn't you put'n in your pocket, sir?" asked a smart boy who was standing by, in a tone which clearly expressed pity for my greenness. I answered with a look of virtuous indignation, as much as to say: "Do you think me capable of trying to do your precious Government out of its dues, stupid as I think its policy?" This smart boy spoke, however, for the whole Continent—Canada and the States alike. Almost everybody one meets in both countries is an out-and-out Protectionist, strongly advocating heavy import duties on every article of foreign production; but, so far as I can learn, not a man

or woman on either side of the St. Lawrence fails to smuggle in as large a quantity of foreign goods as possible on every return journey from Europe. In this matter, at least, American "patriotism" is about as hollow as the frothy, noisy thing which passes under the same name among certain classes in England.

The customs officer called in his wandering wits, and applied them to the question of the watch. After some consideration, he said he thought it must pay, but he seemed in no hurry to announce that this was his decision absolutely. Indeed, he hung about in a fashion which, in my innocence, rather puzzled me at the moment, but which I thought I fully understood half-an-hour later, when a young man of Montreal told me he had prevented the opening of about half-a-ton of works of art and other valuables by a judicious tip of two sovereigns to one of the other officials. I offered no tip, but patiently awaited developments. The officer at last went away and fetched another of his species, and together they gravely discussed the great watch question. It presently occurred to me to inform them that the watch was a deceased lady's bequest to a relative, was really going through to Michigan, and would be on Canadian soil only a few days. In this new light, the question was re-discussed, and the verdict ultimately was that the watch might pass. I then signed a declaration that my baggage contained nothing dutiable, and was forthwith at liberty to carry it and myself across the river to Quebec.

THE GREAT CANADIAN RAILWAYS.

It may be asked why the steamers from Europe do not "pull up" at the quays on the city side of the river, and thus save the passengers the trouble of ferrying themselves and their belongings across. But the fact is, the great majority of the passengers and the greater part of the cargo have no necessary concern with the city of Quebec. They are nearly all going hundreds or thousands of miles further on with as little delay as possible. And it so happens that the two great main lines of railway skirt the southern side of the river, and do not enter Quebec at all. Point Levis is the meeting-place of the Grand Trunk Railroad and the Intercolonial line. The latter follows the southern bank of the river down to a point somewhat below Rimouski, and then strikes away to the south-east, across the centre of New Brunswick, and so on through Nova Scotia, terminating at the fine Atlantic harbour of Halifax. In the winter, when the St. Lawrence is frozen, the mail steamers land the mails at Halifax, and from that place they are carried by rail to all parts of the Dominion. The Grand Trunk is an important system of railways which terminates in the east on the Atlantic at Portland (Maine) and on the St. Lawrence at Quebec. It runs westward along the southern bank of the St. Lawrence to Montreal, where it crosses the river by means of the wonderful Victoria Bridge. From Montreal it follows the north shore of the river and of Lake Ontario, past Kingston and Toronto, and so on by two routes through the whole district formerly known as Upper Canada. Crossing into the States at Detroit and Port Huron, it connects with the Michigan lines, and so secures direct access to Chicago.

The vast majority of the passengers from Europe are emigrants, whose destinations are either the United States or the more western parts of the Dominion. In either case, they can step out of the steamer at Point Levis, cross a wooden platform, and there and then

board the cars which are to carry them the "balance" of their journey—as they learn to call it as soon as they are fully Americanized.

Having landed all the passengers at Quebec, together with as much of their cargo as can be most conveniently sent to its destination from that point, the Allan steamers proceed at their leisure up the river to Montreal. The navigation of this section of the St. Lawrence is at times somewhat difficult and tedious for such large ships as the *Parisian*, and Messrs. Allan therefore carry no passengers above Quebec. The steamers go up in a somewhat leisurely way, lie at the Montreal wharf several days to unload and load, and then drop down stream again to Quebec a few hours before the appointed time for their departure to Liverpool.

FERRIES AND BRIDGES.

But we were not emigrants, and were not, therefore, anxious to push on inland by the first available train. We had come to interview the country, and our first appointment was with the city of Quebec itself. So we checked our heavy baggage to the St. Louis Hotel, and chartered a conveyance to carry us and our lighter belongings to the ferry-boat pier. America being a country of great rivers, steam ferries are very numerous, and this one at Quebec was the first of a good many of its kind which we saw and used. The boats are little more than huge floating platforms, adapted to transfer all kinds of road traffic from side to side. The centre of the vessel will contain several vehicles, horses and all, which are driven on at one pier and off at the other with the greatest facility. The sides are usually set apart for foot passengers. Where the lines of important railways are intersected by wide rivers, there are immense ferry boats which have five or six lines of rail laid along their deck, and are capable of conveying across the whole of a heavy train, with its one or two engines. I shall have occasion to describe one of these wonderful railway ferries at some future time. The Quebec ferry is one of a less remarkable kind, being designed for the transfer of passengers and ordinary road vehicles only. There are two boats, which are always running, crossing each other regularly in mid-stream, and thus keeping up regular communication in both directions every few minutes. As long as the river is open, this ferry unites Quebec and Point Levis as effectually as any bridge. In the winter, the river is frozen hard to a thickness of several feet, and all traffic then crosses on the ice; but how communication is kept up while the ice is first forming in the early winter and is breaking up in the spring, I cannot say. There must, however, be a very awkward interval when the ice encumbers the river sufficiently to stop navigation, without being strong enough to bear wheeled traffic. There is absolutely no other way of crossing. The only bridge over the St. Lawrence, throughout its whole length, is the Victoria Bridge at Montreal, two miles in length. The five great lakes may, indeed, be regarded as forming, with the St. Lawrence, one immense, continuous waterway, beginning at the upper ends of Superior and Michigan respectively and ending with the Gulf of St. Lawrence. In all that length of over 2,000 miles, there are only five bridges. One is the Victoria Bridge at Montreal, already referred to. One is a railway bridge at Buffalo, where the Niagara River flows out of Lake Erie. The other three are all close together below Niagara Falls, where the mighty stream is compressed into so narrow a gorge that it is crossed in a single span.

DRY HISTORY.

The site of Quebec was visited by Cartier in 1534, and the city was founded by Champlain in 1608. It was taken by the English in 1629, and restored to France by the Treaty of 1632. In 1690, the neighbouring English colonies made an unsuccessful maritime expedition against it; and in 1711 the attempt was renewed, with no better success. In 1734, the city had, including its suburbs, 4,603 inhabitants. In 1759, during the Seven Years' War, the English, under General Wolfe, attacked the city and bombarded it. On Sept. 13th took place the first battle of the Plains of Abraham, in which both Wolfe, and Montcalm, the French commander, fell, and England gained at one blow an empire. The French, indeed, recaptured the city the next spring, but at the treaty of peace in 1763 Louis XV. ceded the whole of New France to the English. In December, 1775, a small American force, under General Montgomery, attempted its capture, but failed, after losing 700 men and their commander. The population of the city at that time was only 5,000. In 1861 it was 59,990, and in 1871 it was 59,699, the decrease being attributed to the withdrawal of the British troops forming the garrison.

Quebec is, however, still a French city, although under an English colonial Government. The great majority of the people are of French descent, and are Catholics in religion. This is equally true of the whole of the Province of Quebec. The inhabitants are apparently in comfortable circumstances, but they are much less enterprising and progressive than the English and Scotch, who abound in the more western provinces of the Dominion. They have few manufactures, and their agriculture is of a very primitive and unscientific type.

The city is full of Catholic institutions—churches, colleges, convents, and the like. Some of these own large properties in the city, and this fact is said to account to some extent for the unprogressive and unimproving character of the place. Canada is not the only country in which religious corporations are bad landlords.

A MAGNIFICENT POSITION.

I spoke just now of the magnificence of the position of Quebec, and must try to convey some idea of what it is like. The city lies at the end of a peninsula formed by the River St. Lawrence and the River Charles at the point where they unite. The Charles is to the north and the St. Lawrence to the south. (I must here remark that, for convenience sake, I have hitherto spoken of the St. Lawrence as if it ran from west to east. This is not strictly true. The direction is, indeed, almost exactly from south-west to north-east. When I speak of the north bank, I, of course, strictly speaking, mean the north-west bank; and *vice versa*.) The peninsula runs out to a point where the two rivers unite, but is probably two miles wide at the south-western end of the city. On the St. Lawrence side, cliffs rise almost from the water's edge to a great height. At the extreme point of the peninsula, the cliffs are less abrupt, and there is next the river a belt of tolerably level ground, a few hundred yards in width. On the side of the Charles River, this belt widens out to about a mile. The centre of the peninsula thus consists of an elevated tableland, with more or less abrupt descents on three sides out of four. The highest part of this raised plain is surrounded by a wall of about three miles in circuit, and the southern corner of this fortified enclosure is occupied by the Citadel, which stands at a height of 338 feet above the river. The

town covers the level ground at the foot of the cliffs, and straggles up the cliffs themselves into the fortified enclosure, which it nearly fills. It is, indeed, gradually spreading itself over the tableland outside the walls. It will, I think, be understood from this description why Quebec has been called the Gibraltar of America, and why its elevated Citadel has always been regarded as well-nigh impregnable. There is certainly no stronger place on the whole American Continent.

The pride of Quebec, and the most attractive point to strangers, is a public promenade called Durham Terrace. This is an area of large extent, on the very edge of the cliff, above the St. Lawrence, and is entirely floored over with pine board. The view from this commanding position is superb. Immediately below him, the observer looks down the chimneys and into the back windows of the narrow fringe of houses which is interposed between the foot of the cliff and the water's edge. Immediately beyond this line of houses lies the shipping of the port, which fringes the shore right round the end of the peninsula (where there is a protecting pier) as far as the Charles River. The principal feature in this splendid scene is, of course, the majestic St. Lawrence itself, coming down on the right from the direction of Montreal and disappearing many miles away to the left on its way to the ocean. Immediately opposite is Point Levis, backed by an abrupt and lofty range of hills, whose slopes are dotted in a most picturesque fashion with trim, pleasant, comfortable-looking residences. A few miles down the river lies the large park-like expanse of the Island of Orleans, a favourite place of resort for the citizens and visitors. The city itself, with its quaint houses, numerous churches and other public buildings, roofed with shining tin, straggles down the abrupt slope towards the point of the promontory in most picturesque confusion. The whole place has a most un-American look. There is nothing painfully new about it, and it is wholly wanting in the rush and "go" which are so characteristic of most American cities. One might, indeed, very well imagine Quebec to have been transported bodily from some ancient European country and dropped down complete just where we see it. On fine evenings, especially Sunday evenings, Durham Terrace is crowded with citizens of all ages and classes, promenading to and fro, conversing with all the vivacity of the race to which they belong, seeing and being seen, and enjoying the grand panorama and whatever air may happen to be stirring. The scene at such times is a very pretty and animated one. There is a lift, or elevator, by which, at the cost of two or three cents, one may be quickly dropped into the street below, or as quickly raised from the street to the terrace. I should say that stout and elderly people are very likely to patronise this convenient apparatus liberally, especially in hot weather, for the ascent is a trying one, as we shall see presently. There are several other points of view in the city from which the look-out is little if any inferior to that from Durham Terrace.

Quebec does not possess a large number of imposing public buildings. The old Parliament House was destroyed by fire only a short time ago, and its ghastly, blackened ruins formed one of the most striking objects in the near view from the Terrace when I was there. The new Parliament House, which appeared to have been ready for use before the fire destroyed the old building, is outside the city, in a suburb containing many new and attractive residences. Most of the public buildings are connected more or less closely with the Catholic Church. Such are the Cathedral, numerous churches, the great Laval

University, several convents, nunneries, and hospitals. There are, however, one or two large hospitals with which the dominant Church has nothing to do, and there is also a Protestant Cathedral. The Post Office is a modern and rather handsome building. On the spot where Wolfe fell in the moment of victory stands a plain column, bearing a suitable inscription. I need hardly say that we did not leave the city until we had visited a place where (to use an Irish assassin's euphemism) so much history had been made. The battle which Wolfe won in his last hours deprived France of her greatest colony, and was altogether one of the most striking and momentous events in the (so far) brief history of the North American Continent.

THE HILLS AND THE STREETS.

The chief ascent from the lower to the upper town is a tortuous thoroughfare called Mountain Hill Street. The inhabitants apparently named this street on the same principle on which children describe something exceptionally large as "a great big thing." A single qualification does not convey their meaning adequately, and they therefore pile up the adjectives, at the risk of being guilty of tautology. The people of Quebec appear to have been in a similar difficulty with regard to the street in question. It is so amazingly and alarmingly steep that neither simple "Hill Street" nor simple "Mountain Street" conveyed an adequate conception of the gradient. The two names were therefore combined, and so we get Mountain Hill Street. That, at least, is my theory of the origin of the name: and if it is not a true one, it ought to be. If the theory does not fit the facts, why—hang the facts! I have as much right to say that out boldly as certain other theorists have to whisper it to themselves, and to proceed quietly on the assumption that they can strangle inconvenient facts. There are, by the way, several other approaches to the upper town which are hardly less steep than Mountain Hill Street.

If a street is on an incline of about 45°, its very steepness is a sufficient reason why it should be kept in the best possible condition. That, at least, is a reasonable proposition in this country. But in Canada, and especially in Quebec, its reasonableness is not admitted. "The steeper the street, the worse the road!" That is the motto on which Quebec acts, whether it believes in it or not. The city streets are abominable everywhere; but those which lead up the steep sides of the hill are—. But language (that is, polite, Parliamentary, Christian language) fails me, and I do not use any other sort. How can I convey my meaning when all the choicest adjectives are inadequate, and all the strongest expletives inadmissible?

I have been over some of the worst roads which the most parsimonious of English highway boards are supposed (pure supposition!) to keep in repair. I have tramped in all weathers along those straight unstoned thoroughfares of black mud or black dust, according to the season, which are called "droves," and which intersect the borders of Somersetshire. I have climbed Swiss mountains by tracks which are the beds of foaming torrents after rain, and rough mule paths at all other times. I have scrambled over the smooth, rounded, and greasy cobble stones which form the "pavements" of the steep and filthy alleys of a North African city. I have ridden over a good many miles of the unpaved, unmacadamized tracks which are dignified with the name of roads in a backwoods county in Michigan. I have, lastly, ridden up and down Mountain Hill Street and some similar thoroughfares at

Quebec; and I declare that, for unspeakable vileness, the Quebec streets "take the cake," as the Americans put it. Everybody knows that, if a steep street is not kept in some sort of order, it soon falls into a condition of disorder such as no level thoroughfare can equal. This is especially true of a city where the rainfall is occasionally heavy, and the downrush of water, therefore, very great. Quebec is just such a place; and, so far as I could see, the torrents which rush down from the upper town after storms are left to work their own sweet will on the roads. The beds of mountain torrents—the hilly streets are simply that, and nothing more. This is amazing enough, but there is something more amazing to be told. I was informed by persons whose truthfulness could not be questioned (the aged minister of the old Baptist Church among others) that the roads had, of late, considerably improved!! "Good heavens!" I exclaimed (I hope that is not an inadmissible expletive), "what, then, in the name of all the gods at once?" (*Shakespeare*) "did the roads used to be like?" My informants could not tell me—that, I knew, was impossible; they could only reassert: "They're better now!" Candour, moreover, compels me to admit that there were, in some parts of the city, some symptoms that "repairing" was going on. Opposite our hotel, for instance, several loads of stones, ranging from the size of my head downwards, had been tipped at random into the street; and over these huge boulders the vehicles lurched and bumped until their occupants had fairly to hold on with a firm grip, just as if they were in a gale on board a "beam-ender." I sought to find a cause for this disgraceful state of things, but I got no satisfactory explanation. The head porter at the hotel "guessed," indeed, that the city government was corrupt, and that now and then the bottom fell out of the city chest, with the unfortunate result that the funds which ought to be applied to improvements somehow disappeared. That there is corruption in the Dominion and the Provincial Governments, I shall pretty conclusively show next week; and that the corruption should find its way down from headquarters to the municipalities is not, perhaps, surprising. The marvel is that the mass of the citizens, who are presumably decent, rational people, should stand this sort of thing year after year. It is perfectly safe to assert that the unnecessary wear-and-tear sustained by horses and vehicles, to say nothing of human nature itself, through the infamous condition of the streets of Quebec, represent a sum which would keep the thoroughfares in decent order. Yet, here are some 60,000 people, content to wade through mud, to climb the beds of mountain torrents and call them streets, to have their bodies bruised, their tempers soured, their animals worn out, their "traps" shaken to pieces, when (for they are self-governed) the remedy for all these grievances is in their own hands. They certainly display a very unnecessary amount of patience.

I GO TO CHURCH.

As we spent a Sunday in Quebec, my companion and I duly went to two Protestant churches, to learn what kind of theology passes for orthodox among the Canadians. In the morning, we visited an old and plain Baptist church, where we found a mere handful of people and a very ancient-looking minister. Baptist doctrines are apparently at a discount in Quebec. Seeing so venerable a man in the pulpit, I rather ex-

pected to hear a sermon in the style of fifty years ago, but in this I was agreeably disappointed. The preacher was no fossil, much as he looked like one. On the contrary, he gave evidence, in the course of an exceedingly thoughtful address, that he was fairly well posted up in the modern way of viewing things. His remarks were, however, chiefly wasted on empty pews. I am afraid, too, that some of the occasional attendants at his church were not among the most attentive and appreciative of hearers. One of them, at any rate, had found time to perpetrate the following inside the cover of the hymn-book that was handed to me:—

"A man he owned a terrier dawg,
An ugly, b-b-bailed cuss;
And whene'er that man and dawg came round,
There was sure to be a muss."

"Calvin."

The writer of this wretched doggerel probably thought the best part of his "joke" consisted in his crediting the stern theologian of Geneva with its authorship. There is certainly something absurdly incongruous in the association of Calvin's name with such stuff. Think of that cast-iron "reformer" diverting his mind, even for a moment, from the contemplation of the awful theological system he had invented, to anticipate in verse the American slang of the future! A word, by the way, as to this slang. "Muss" must not be confounded with "mess." A "muss" is a dispute, a row, or a quarrel, and the word is constantly used in the American papers.

In the evening, we attended the Methodist Episcopal Church. The building is a spacious and handsome one. The congregation was large and the music excellent, but the sermon was a common-place stock discourse of the regulation Methodist pattern, and presented a striking contrast to the address of the ancient preacher whom we heard in the morning. But what the Methodist Episcopalian wanted in breadth and depth he made up in strength of lung.

At these two churches we first made the acquaintance of an institution which is universal throughout Canada and the States—viz., the sending-round of the hat. No service is ever held, no Sunday-school or Bible class ever meets, but a collection is made. And it is not at the doors that this is done. The plate, or box, or bag, as the case may be, is thrust under the nose of every person, individually, and there is no escape for anybody who cares what other people think of him. Contributions given in this fashion may be labelled "voluntary," but they are not so in reality. In America, there is probably less of that social pressure which in England tends to squeeze everybody into the same groove; but it is certain, if human nature is the same on both sides of the Atlantic, that a system of compelling people to make their gifts under the eyes of their neighbours must, in America as in England, tend to induce or compel people to give more than they care to give, and in some cases more than they can afford. What a man will give in perfect secrecy is the measure of his voluntary contribution. All that he gives beyond this sum, simply because his neighbours are looking on, is a forced contribution; and no church, whether in England or America, has, it appears to me, any right to say it is supported by "freewill offerings" while it raises money in the way I have described. In this matter, however, I am afraid the case is one in which I am on one side and the whole American people on the other. At any rate, I entered no church where the "hat," or a substitute for it, was not sent round.

At one place (Denver, I think) I heard a minister announce that, on the following Sunday, *after* the usual collection, the "friends" would be "afforded an opportunity" of giving towards the erection of a mission church in a distant city. It struck me that two collections in immediate succession constituted rather strong measures, but I am bound to say that the congregation appeared to manifest no surprise or resentment. But, then, we cannot all shovel up dollars in the streets as the Denverites appear to do!

I AM ROBBED FOR THE FIRST TIME.

The American hotel thieves are numerous, clever, and daring. They are apparently ever on the watch, and the hotels are so large, and necessarily so public, that it is very difficult to circumvent the scoundrels. I shall have occasion to describe more of their feats further on; but as my first experience of them was gained in the very first city and the very first hotel we entered, I may as well let them make their bow here. I left a volume of "Appleton's Guide" on the desk of the writing-room of the St. Louis Hotel, late on Saturday evening. Next morning it had disappeared, and it never came back. In my innocence (the genuine quality of which my readers must have discovered by this time) I complained of my loss to the elegant gentleman who acted as "boss" to the two or three people behind the desk. He looked at me with a sort of pity, and then proceeded to explain to me that if I "left things lying around," I must expect to lose them. Books, sticks, umbrellas, coats, and the like, were, he said, sure to go, if so left. "Then such things are regarded as common property here?" I suggested. He gave me to understand that I had about hit the mark, and that I was only displaying my greenness by supposing that a notice pinned up at his desk would be at all likely to lead to the recovery of the book. On the whole, I came out of that interview with the impression that the head clerk thought that nobody was to blame but myself, that I had been a bit of a fool to allow myself to be robbed of my book, and that the thief who had taken it had done a rather smart and creditable thing. If this was not what the head clerk thought, I can only beg his pardon, and plead that his tone and manner belied him.

THE FALLS AND THE ROAD TO THEM.

There are two fine waterfalls near Quebec. One of these (the Chaudière) is on the southern side of the St. Lawrence, 10 miles from Point Lévis. A stream 350 feet wide falls from a height of 150 feet. The Falls of Montmorency are on the Quebec side and only eight miles off. As we had not time to see both falls, we selected the latter, as being somewhat nearer and more accessible.

We chartered a two-wheeled vehicle peculiar to Quebec and called a *caleche* (French, of course, and pronounced in English "calash"). The body of this machine is suspended from stout leather straps, somewhat in the style of the old English post-chaise. It carries two persons, besides the driver, who sits on an uncomfortable front seat by himself. In suspending the body on leather springs, the inventor of the apparatus no doubt had in view the execrable roads over which it was intended to run. But whether leather has any advantage over steel in Quebec is questionable. All I can say is that, by the time we had got clear of the city and crossed the bridge over the Charles River—a distance of perhaps two miles—both my companion and

myself were as sore as if we had been beaten. The roughness of the streets was of two kinds. In the upper part of the city the roads were rocky, in the lower part boggy. Of the former I have already said something, but the latter have equal claims on my attention. The streets in the lower and more level regions, then, were plentifully furnished with unfathomed holes full of black mud, precisely like the bad places in a Somersetshire "dove." I have said they were unfathomed, and so they were—*by me*; for I certainly did not alight and drop a plumb-line into their depths; but I do not wish it to be supposed that I declare the holes unfathomable—quite another thing. At every yard or two of distance, one wheel of our extremely lively vehicle went down into the unfathomed depths, and I was forthwith cannoned against my companion, or he against me, with a force which threatened mutual annihilation. Before the rocking of the calash had had time to subside, the road suddenly dropped out from under the other wheel, and he who had just before been the target became the projectile, and was in his turn hurled against his neighbour. As for our driver, no doubt his joints had all been dislocated and his muscles rendered insensible to further bruising years ago; and as he was working "by the piece," he rattled away as heedlessly as if he were on the smoothest of asphalt. We had at last to insist on his driving more slowly and keeping a sharp look-out for pitfalls; and we declared we must get out if he did not. But there were ups as well as downs. The streets are so bad that crossings for foot passengers have to be provided at every corner. These crossings are of wood, much rounded in the centre to allow the rain and mud to run off; and where the streets are very badly worn, they stand up above the surface like one-half of a long barrel. Driving over numerous crossings of this sort was bad enough; but the half-barrels had this advantage over the isolated pitfalls, that they jerked both wheels up and let them down at the same moment, and thus saved the mutual cannonading which I have already described. Regarded as a whole, that ride of two miles or thereabouts was so bad that, if I were an imaginative writer instead of the most prosaic and matter-of-fact scribe, I should most certainly declare that our recent luncheons were shaken down into our boots, our teeth out of our heads (a not improbable event in the case of what the Americans call "store teeth"), and ourselves out of our clothes.

But the country highway board, or whoever the road authorities may be just outside of Quebec, discharge their duties infinitely more efficiently than the city people. As soon as we crossed the Charles River bridge, we were on a decent road, and the ride thence to the falls was a very pleasant one. The trim, comfortable-looking wooden houses of the Canadian-French agriculturists stud both sides of the road all the way. There are few signs of actual wealth to be seen; but then the signs of abject poverty are at least equally few. The people are apparently a steady-going race, content to jog on as their fathers jogged, and not caring much for any new-fangled notions either in the way of scientific farming or of religion. Those of them who are not engaged in agriculture are employed in lumbering operations—that is, in bringing timber down from the forests, cutting it up into "lumber" (planks), and shipping it to distant parts. There are some very extensive lumbering establishments close to the falls.

These Falls of Montmorenci are wondrously beautiful. The stream is only about 50 feet in width, but it

falls from a height of 250 feet, and the dashing of the water against the rocks gives it the appearance of a torrent of milk. A few hundred yards from the foot of the fall, the stream is lost in the mighty mass of the St. Lawrence. A series of flights of wooden steps, with resting places at each stage, enables the visitor from above to descend to a splendid point of view near the bottom, and immediately in front of the fall. This platform is usually drenched with the mist-like spray from the fall, and the visitor who intends to descend would do well to carry a mackintosh with him. There is another thing he should remember if he happen to be a "weight-carrier" or at all short in the wind—that if he goes down, he has to come up again. I can personally vouch for the fact that coming up those endless ladders is no joke on a blazing day. It is, however, necessary to go down in order to realize the height of the fall. The guide-books say it is 250 feet. Those who do not go down are very likely to declare that to be a fib. Those who do go down (and come up again) know and feel it to be the truth, if not something less. Unfortunately, this beautiful fall has fallen into the hands of private speculators, who levy a toll on all visitors. I should be disposed to spill a little ink over these people, or rather over the folly which has allowed them to secure possession, were it not that I have bigger game of the same species awaiting me at Niagara. I must reserve myself till I get there, for I shall then require the aid of all the strong things in my limited vocabulary.

The drive back from the falls to Quebec was one of the most charming of all my American experiences. The city, clustering around and clambering over its precipitous central seat, just as Edinburgh surrounds and covers its Castle Rock, stood up before us, calm and queenly, its tin roofs glistening in the sunshine. We were too far off to hear the noises of its streets, or to see the naked rock and the wretched quagmire of its thoroughfares. 'Twas distance that lent enchantment to the view, but the enchantment was very complete while it lasted. The outline of every building within the range of vision stood out as clear and well-defined as if we were only a mile off, instead of six or eight miles. I felt disposed to ask whether the French who first settled the district had brought with them that marvellous transparency of atmosphere for which, at certain seasons, the neighbourhood of Paris is famed; for I have never seen anything so like that clear vision of Quebec as the views I have sometimes had of the French capital from the windmill of Montmartre, the terrace of the ruined chateau of St. Cloud, and the heights of Menilmontant.

But see, here is the Charles River again, and here, too, is the end of the decent bit of country road. And now for the second edition of Purgatory. But I forbear—mainly out of consideration for the sharer of my perils and my sufferings, who may possibly see these lines, and may not desire the pain of going through his trying experiences, even in imagination, a second time within a few minutes. Behold us, then, safe back in the dining-room of the St. Louis Hotel, replacing, as fast as the waiters and the flies will let us, the material which our drive has (figuratively) shaken down into our boots.

EXCURSION PARTIES IN THE WAY.

Those eminent excursion and tourist agents—Messrs. Cook, Mr. Gaze, Mr. Caygill, and the rest—have their counterparts on the other side of the Atlantic, and the Americans are "Cooked" about their vast continent on a scale becoming their eminence in all that is big.

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During the holiday season, the trains, the steamers, and the hotels are full of these huge travelling parties, and in their presence the individual traveller is sometimes a little lost sight of unless he takes care to assert himself. There were two such parties in Quebec when we were there. One of them, La Line, I think, from Philadelphia, were mostly young people of both sexes, connected with some religious body. They had secured a great many of the best rooms at our hotel; and when Sunday evening came, they filled the large drawing-room to overflowing. There were some good singers among them, and these treated all who could get within ear-shot of the drawing-room doors to an excellent impromptu sacred concert. Listening to the charming voices of some of the lady vocalists, I was disposed to forgive and forget my banishment to a rather poor bedroom on the top-floor. But we found next morning, on going, in what we thought good time, to secure "state-rooms" on board the evening boat for Montreal, that the conductor of this party had forestalled us, and secured every good room in the boat; and I certainly did then wish the conductor and his whole party in another and a better place. (No harm, I hope, in so benevolent a wish as that.) It was, however, a case of Hobson's choice. We had to take the excursion party's leaveings, or leave their leaveings; and as it was necessary we should push on, and it was part of our plan to stick to the river as long as possible, we accepted the best berth we could get. When the time came for embarking, we hired a vehicle to convey our baggage down to the quay, but we took very good care not again to trust ourselves to ride down Mountain Hill Street.

A steamer runs each way between Quebec and Montreal every night. These steamers start about five in the afternoon, and reach their destinations early in the morning. I shall have a little to say about these splendid boats further on. I wish first to supply some account of one of my fellow-passengers. This I will give in the letter form in which I wrote it for a Michigan newspaper while the circumstances were fresh in my memory. Here it is:—

A PROFESSOR OF THE ART AND SCIENCE OF CORRUPTION.

"SIR,—I am an English journalist on my travels; and, being deeply interested in whatever concerns the public and national life of Canada and the States, I am doing my best to keep my eyes and ears open to all that appears to have a bearing on these great subjects.

"I landed at Quebec from the *Parisian* on the 11th inst.; and on my way from Quebec to Montreal by boat, I met with so remarkable a political phenomenon, that I am anxious to photograph it while its features are still fresh in my memory. I call the phenomenon 'it,' but it was really a 'he,' being no less than a member of the Dominion House of Commons. This person (I do not care to soil the word 'gentleman' by applying it to him) was a somewhat elderly man, who told me he was a manufacturer of wood pulp, and represented a county or district somewhere down by the Saguinay River. He did not give me his name, but I heard him referred to by a name which sounded to me somewhat like Seymour. This, probably, is not the correct spelling of the word, whatever the pronunciation may be; for he was evidently of French extraction, like many of his constituents. He spoke English badly; and even his efforts to swear in our noble language (which he made about once a minute

on an average) were such as would have provoked the derision of a British rough. He could not get beyond 'Ba Gad!' and 'Dam!' but one or other of these expressions was somehow introduced into every second sentence.

"But it is not to his French origin, or even to his persevering attempts to swear in English, that I wish to call attention. It was neither of these things which constituted him a phenomenon. What struck me with amazement was this man's cool, cynical, ostentatious avowal of belief in the universality and omnipotence of political corruption. His creed, beautifully short and simple, was this:—'Every man has his price;' and he did not hesitate to admit that he himself went into the market, on behalf of his party, whenever it appeared to him necessary so to do. His party was that of the existing Government—the party of which Sir J. A. Macdonald is the head, and which has given to Canada the more than doubtful blessing of a protective tariff. On the blessings flowing from the new 'national policy,' on the smart manner in which his party had dished their opponents by adopting that policy, on the stupidity and incapacity of Blake and the 'Grits' generally, and on his determination to uphold the existing Administration by all and any means, my fellow-traveller dilated by the hour, in such English as he could command, and with the constant aid of such oaths and expletives as he had mastered.

"He told me among other things that he was the contractor for the new Provincial Parliamentary buildings at Quebec, and he hinted pretty plainly that he had found the contract useful as a means of 'influencing' his constituents. He assured me, moreover, that his son was a Government surveyor or engineer; and that as he (the son) had, in his official capacity, the power to cause a good deal of money to be spent among his father's constituents, he (the father) had a very firm hold upon them, and was accustomed to secure his election without the smallest trouble. He said, indeed, that in the event of his own retirement from Parliament, the electors would undoubtedly manifest their gratitude by electing his son to the vacant seat. With reference to his large Government contract at Quebec, this exemplary M.P. said he had a claim against the Province of 60,000 or 70,000 dollars, for 'extras,' and he remarked significantly that the Government could not say 'No' to him. He assured me, further, that he had been so useful a man to his own party, that he had established his claim to a Senatorship, and he ventured to assert that he had only to ask for a seat in the upper House of the Legislature to get it.

"A young man of Montreal, who was evidently a serious politician belonging to the 'Grit' (Reform and Free Trade) party, listened to the greater part of our conversation with much interest and, at times, with undisguised disgust. At last, when the M.P. was talking most unblushingly about his success in buying people, this young man found it impossible to restrain himself. Addressing the old man in a tone of what seemed most natural indignation, he said:

"You are wrong, sir. Men are not so universally corrupt as you suppose. They are *not* all to be bought. I am an elector myself, and I defy you to buy me, even if you were to offer me 10,000 or 100,000 dollars."

"The cynical laugh with which the hoary old political adventurer received this outburst was a thing which I shall remember, and remember with a sensation of disgust, for many a day.

"'Ha! ha!' he cried: 'Those are (expletive) fine words. It is a very cheap virtue to offer your goods when they are not wanted. But just wait till we want them! I know (expletive) well that fellows who talk like you are always the cheapest to buy when the time comes.'

"The Montreal man made no further attempt to argue with so indecent a professor of the art of corruption; but the latter turned to me and remarked that what he had said was true—that politics all round consisted simply of 'the same (expletive) old game,' and that in playing that game, as he confessed he had always done, he was merely doing what everybody else did.

"Some time afterwards, the Montreal 'Grit' told me, in the hearing of the M.P., that the grossest corruption undoubtedly prevailed in some of the constituencies in the neighbourhood of Quebec, and he cited a particular case in which the dominant party was understood to have carried an election at a cost of 10,000 dollars. The old legislator listened to this story with perfect coolness and patience, and at its close he again burst out in one of his cynical fits of merriment, and said:

"'Wrong again, young man! The cost was only 5,000 dollars, and I drew the cheque for the money.'

"He subsequently assured me that all was fish that came to his net, inasmuch as he was accustomed to buy up opposition journals as well as opposition and neutral votes. He had, he said, bought up two or three newspapers that were in his way, and he added that he still had the machinery of one or two of them stowed away in a safe place, ready for use whenever he might find it desirable to set up an organ to express his own lofty and enlightened views.

"I was so astonished at this man's shameless confessions and cynical creed, that I could find little to say at the moment, further than to express a belief that things were not nearly so black as he had painted them. His assertions may, of course, be untrue. I, being a stranger, have no means of testing their truth. If they are false, the author of the falsehood appears to me to be none the less a phenomenon on that account; for it is to me almost inconceivable that a man should affect a shameless cynicism and an utter political dishonesty which are, in reality, foreign to his character. The most reasonable and charitable conclusion appears to me to be that this man painted himself with tolerable accuracy, while he grossly maligned the mass of the Canadian people. Being himself utterly destitute of political principle, he had, to use an English metaphor, 'measured other people's corn with his own bushel,' and attributed to all his countrymen the political vices which he had allowed to master his own conduct. I am no blind optimist; but I utterly refuse to believe, on the evidence of a man who himself revels in corruption, and then boasts of it, that the whole Canadian people are politically corrupt. They have, I think, allowed themselves to be misled into the adoption of a protectionist policy, but I have no doubt whatever that they will in due time wake up to the gravity of their mistake. Meantime, it is both the duty and the interest of all decent Grits and National Policy men alike to do all in their power to rescue their Legislature from the disgrace which must inevitably rest upon it so long as it contains men of the stamp of my fellow-voyager from Quebec to Montreal on the night of July 16th. C. C.

"Cass City, July 31."

THE M.P.'S LITTLE MORAL STORY.

I omitted to tell in the foregoing letter a story which the hoary old sinner told me in illustration of his genius for practical joking. He was himself nominally a Catholic, but I suspect that his real creed was not a very long one. Anyhow, he regarded Sunday (as most French Catholics do, whether they live in France or in Canada) as a suitable day for anything in the shape of sport or amusement. This by way of preface. Now for his story. He had recently, he said, a Protestant gentleman of Montreal staying at his house among other visitors. This gentleman arrived on a Saturday, and was duly informed that arrangements had been made for some grand game (I forget now exactly what) to be played next day (Sunday). He was invited to join, but declined, on the ground that he was not accustomed to spend his Sundays in such a fashion. His Sabbatarianism was, however, of a sterner quality than his Temperance principles; for on the Saturday evening his hospitable host, who had well plied him with liquor, had to see him carried to bed, dead drunk and fast asleep. He slept till the middle of Sunday forenoon, when his host went to his bedside, woke him, and asked him *how many more days he intended to sleep*. On demanding an explanation of this odd question, he was gravely informed that he had slept about 36 hours, and that it was already *Monday forenoon*. He rose and dressed; and, being told that the amusements of the previous day were to be continued, he consented to join in them. It was not until the fun and the day were both over that he was duly informed, amid the boisterous mirth of his host and the other guests, that he had devoted the whole of the Sabbath to amusement. How the Protestant Sabbatarian looked, and what he said, when he learnt how he had been befooled, my informant did not say; but I shall never forget the keen relish with which my fellow-passenger told the story, or the boisterous laughter to which his own recital of the circumstances moved him. He evidently regarded the affair as the very perfection of a joke. Certainly, no moralist can defend the host's share in the business; but, on the other hand, it is not very easy to pump up much sympathy for his drunken Sabbatarian visitor. I should say that Catholic host and Protestant visitor were about equally worthy of each other.

THE QUEBEC AND MONTREAL STEAMBOATS.

The steamer on which I made the acquaintance of the corrupt and cynical M.P. was a fair specimen of the fine vessels which navigate the rivers and lakes of America. I have never seen anything like them in Europe. Some of the famous pleasure boats on the Clyde will probably accommodate more passengers; but then they are adapted for day passages only, and provide no sleeping accommodation whatever. But the American boats, like the American trains, traverse such vast distances that they have to provide for both day and night.

Most of the American river boats are still propelled by means of paddle wheels, although on the ocean the wheel has been almost universally banished in favour of the more compact and economical screw. But the chief peculiarity of the river boats is that they are driven by a single beam engine, placed in the very centre of the vessel. When an Englishman sees for the first time the huge arms of the beam swaying up and down at a great height above the deck, he is apt to

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think the arrangement clumsy and not by any means graceful. Appearances apart, there is no doubt some practical reason why the American steamboat builders adhere to this peculiar arrangement, but I have never heard what that reason is.

One disadvantage attending this arrangement is that it always spoils the saloon of the boat. In the case, for instance, of our Quebec and Montreal boat, the saloon would have been much finer and more striking than it was, but for the large space abstracted from its very centre by the engine. Not that anybody unacquainted with the construction of the boat would have guessed that the engine was there. All that was visible was a partitioned space, occupying the whole width of the saloon except a narrow passage on each side. This partition was rendered as slightly as possible by means of moulded panels and handsomely mirrors; but the obstruction was there, and the fine room suffered accordingly.

The saloon, thus cut almost into two by the engine space, was an apartment nearly as long as the boat and probably nearly 20 feet high. It was lit entirely from the roof, being lined completely on both sides by two tiers or storeys of "state rooms." (Grand name for a little thing again.) The upper tier was reached by means of wide and handsome staircases adjoining the engine space, and by galleries running along both sides of the saloon. The saloon itself was handsomely carpeted, and furnished in drawing-room style with tables, easy chairs, lounges, and hassocks, in quite a luxurious fashion. At sunset, the room was beautifully lighted by means of numerous lamps suspended from the roof. Each end of the saloon opened upon a small covered deck, amply provided with chairs; and it was as we sat on the stern deck, enjoying the coolness of the evening and the beauty of the river scenery, that the Canadian M.P. unfolded to me his peculiar code of ethics.

The "state-rooms" were the usual diminutive cabins, containing as a rule two berths each. I strongly advise any of my readers who may happen to find themselves on board a boat of this kind to take possession of one of the comfortable lounges in the open saloon and sleep there, rather than turn into a tiny "state-room" with a stranger. If the boat is not crowded, and you can secure a cabin to yourself, well and good—a cabin accommodates one comfortably enough; but for my own part I very much prefer a sofa in the saloon to one-half of a cupboard, shared with a passenger whom I never saw before and may never see again—a man who may be a Garfield, but who may possibly be a Guiteau, or (worse!) an O'Donovan Rossa; who may be a decent person of unobjectionable habits, but who may, on the other hand, chew continuously and spit copiously.

The greater part of our run from Quebec to Montreal (180 miles) was made during the night, and we therefore saw little of the river scenery. The view backward on leaving Quebec, which we did see, is very fine. The upper city and the Citadel, crowning the highest point of the rocky promontory, stood up majestically through the clear evening air, and remained in view an incredibly long time. The approach to Montreal was equally interesting. The eyes of all strangers were first strained to catch a view of that "eighth wonder of the world," the Victoria Bridge. The busy factories, the fine public buildings, the graceful spires, the crowded wharves, and, behind all, the abrupt mountain height from which the city took its name, caused us at the outset to form a favourable opinion of the pros-

perity, the beauty, and the picturesqueness of the city. This impression we retained, with few qualifications, after making the acquaintance of the place.

We walked from the boat to the Windsor Hotel—a longer and hotter journey than we bargained for, and by the time we reached there, we were (not to put too fine a point on it) ready for breakfast. Having taken possession of the bed-rooms allotted to us, we were shown into a dining-room, which, for size, for the beauty and costliness of its decorations, and for generally attractive appearance, surpassed anything we subsequently met with in any part of the country (either in Canada or the States). As the Windsor Hotel is admittedly one of the finest, if not the finest, hotel on the continent, and as it is a fair type of first-class American hotels, perhaps I may as well, before proceeding further, endeavour to give some idea of this huge and splendid building.

A GREAT AMERICAN HOTEL.

When I say that the Windsor at Montreal is possibly the finest hotel on the American Continent, I am not thinking of mere size, or of any other single qualification. I speak of it as a whole. There are much larger hotels in the United States, the Palace at San Francisco, with its 1,300 beds, being the largest of all. There are others which in some special feature probably surpass the Windsor. But I have been at the Palmer House, Chicago; the Palace, San Francisco; and the Fifth Avenue, New York, admittedly three of the grandest hotels in the States, and I am disposed to think that, regarded as a whole, the Windsor is at least equal to any one of them. The cost of the building, with its furniture and decorations, amounted to millions of dollars. The extent and costliness of the decorations of certain places of public resort in America are indeed amazing, regarded from the sober standpoint of an Englishman. One of my fellow-passengers on my return voyage from New York was a young English artist, in the employ of a famous Boston firm, who was to be married the day after his arrival in Liverpool, and to sail with his wife for Boston next day. He told me that, among other first-class "jobs" he had in hand, was the decoration of a large new dining-room in a famous restaurant at New York; and he assured me that his instructions were to spend 120,000 dollars on that one room. That may, of course, have been an exaggeration; but after having seen the dining-room of the Windsor, and somewhat similar places elsewhere, I feel under no actual necessity to doubt my fellow-passenger's figures.

The Windsor Hotel stands on an elevated site, at the corner of a large open space called Dominion Square. It was in this square, by the way, that the people of Montreal built their grand ice palace and held their "ice carnival" last winter. Similar high jinks are in progress there again this year. The ice palace, lit with the electric light, is said to be indescribably beautiful. The Governor-General (Lord Lansdowne) and his lady have come down from the capital expressly to see the fun and to help in it. When the time comes to pull down the "palace," a large part of the material is stowed away in the ice vaults of the Windsor for summer use.

The Windsor, like most other American hotels, has two visitors' entrances, one of which is intended specially for parties comprising ladies, who are thus enabled to reach the staircase or elevator without coming in contact with the smoking, expectorating groups which are generally scattered about the main hall. The elevator,

or, as we call it, the lift, is an institution in every American hotel of any importance. The heights of the buildings are often so great, that it would be impossible to induce guests to take rooms on the upper floors if they were compelled to walk upstairs whenever they wanted to get to them. In some of the larger hotels, there are two elevators, one or other of which is going night and day. There is room for ten or a dozen persons to sit or stand in some of them; and as they are worked by powerful engines or hydraulic pressure, the number makes no difference to the speed. An attendant sits or stands in the corner of the little moveable room, and from morning to night, or from night to morning, he is eternally oscillating between earth and heaven, carrying hundreds up and bringing as many down hourly. What grievous sin the poor wretch has committed, that he should be doomed to this monotonous form of penal servitude, I have never been able to make out. Yet he is sometimes merry enough, chatting freely with his acquaintances among the regular patrons of the hotel, and chaffing the precocious resident children who make him carry them up and down a dozen times a day. For there are children resident in the hotels, sometimes for years together. Many rich people, who are too indolent to contend with the domestic difficulties of a country where the great servant question is very much greater than it is in England, are accustomed to solve the problem by simply shutting up their houses and betaking themselves, children and all, to some hotel. There they often remain permanently. It is not an uncommon thing to see a handsome perambulator, containing a baby and attended by a fashionable young-lady nurse, pushed into the hall of a great hotel, through the crowd of loungers which hangs about the door. The baby is probably a native of and resident in the house; and when you sit down to dinner, you may perhaps find its mother, ablaze with jewellery, sitting at the next table to your own, with a handsomely-dressed child on each side of her.

The hall of an American hotel is a general lounging place, where the guests of the house, their local friends, and apparently the well-dressed public at large, are at liberty to loaf about, to smoke (and spit) to their hearts' content. In the evening, the scene is an animated one, for outsiders then drop in to have a chat with any guests they may happen to know. The groups of rooking and other chairs which are scattered round the pillars and elsewhere are then full, and scores, sometimes hundreds, of loungers are standing or sauntering about the spacious floor. In some of the great hotels in busy cities, a good deal of business is said to be done in this fashion. The amount of smoking everlastingly going on is amazing, but there is, as a rule, wonderfully little drinking. The bar is certainly a far less important feature of a hotel than it is in England. Indeed, the bar is sometimes thrust away into an obscure corner where it is by no means easy to find it. A visitor who does not expressly ask for it might sometimes be in the house for a week without seeing it. Not unfrequently, it opens into the billiard-room. This was the case at the Windsor; and in this connection I may remark that a single room at that hotel contained 14 splendid billiard tables. This fact will give some idea of the scale on which the place is laid out. But even when many scores of persons were lounging about in the hall or billiard-room, it was rarely that more than one or two were to be seen at the bar; and those who were there were sometimes customers for

iced water, which the barman dispenses gratis to all comers. Iced water is on draught in the hall also.

The hall of the Windsor is, I think, the finest I saw anywhere. It covers an unusually large area, and its paving and pillars are of beautiful marble. It contains, besides the manager's and clerks' office, a large stall for the sale of newspapers, books, cigars, &c.; a branch telegraph office, from which messages are forwarded to any part of the world; a railroad ticket office, where an attendant clerk will book you to any town on the continent; a telephone office, whence a conversation may be held with any person in the city or neighbourhood who happens to be a subscriber to the local telephone exchange. A whole army of porters (white and black), under the command of a "boss" porter of immense importance, is always waiting in a corner of the hall, ready to respond in a moment to a call from the desk or from a visitor. Just inside the chief entrance there is a carriage office, where you may hire any kind of vehicle to which your taste inclines. Behind the counter of the manager's office is an immense safe, in which visitors may deposit their valuables for safe keeping. There is also a large case of very narrow pigeon-holes, one for every room in the house, and bearing numbers corresponding to those of the rooms. The numbered key of the room, when not in use, is placed in its own hole, and any letters received for the occupant of the room to which the key belongs are put with it. Every visitor can, therefore, see at a glance, without troubling anybody, whether the post has brought him anything. Visitors like to carry their keys about in their pockets, instead of handing them in at the office every time they come downstairs. As they sometimes carry them away altogether, the hotel proprietors make the keys as awkward to pocket as possible. The keys at the Windsor, for instance, are very small in themselves, but they have hanging from them a long, heavy, flat piece of metal, through which the key is fixed, in such a way that the two are bound to be always at right-angles with each other, and therefore to constitute a very awkward thing to put into one's pocket.

I have already spoken of the dining-room of the Windsor, and must content myself with saying, further, that the whole circuit of its pavilion-shaped ceiling is divided into panels, and each panel contains a charming painting, by a local artist of note, of some English building or scene, the Queen's palaces at Windsor, Osborne, and Balmoral being among the most striking subjects. The wide staircase is of white marble throughout, and the immense corridor or ante-room on the first floor, leading to the dining-room, is covered from end to end with the richest Wilton or Turkey carpet, on which the groups of visitors move about noiselessly. A grand pianoforte of the finest quality and handsomest appearance stands in the middle of this room; and couches, settees, and easy chairs, sumptuously upholstered, are placed in all convenient spots. All that the decorative plasterer, painter, and gilder could do, with unlimited material at their command, has been done to render this ante-room, the dining-room, and the other public rooms on the first floor, models of beauty and luxury.

Eating and drinking are going on nearly all day in large hotels like the Windsor. Arrive when you will, some meal or other is "on." Breakfast is served till nearly noon, and by the time the supply of breakfast is turned off for the day, lunch is turned on. Of dinners there are often two—an early one and a late one, and the late

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one is nearly ready by the time the early one is over. After dinner, a lighter repast, which may be called either tea or supper, is kept going till a late hour. In some hotels, visitors may, if they like, put up on the English plan and be charged a fixed sum for each meal at which they are present; but the vast majority prefer the American plan and pay so much per day. The charge at the Windsor is five dollars per day. This sum covers everything except "tips." It is common enough to hear it said that "tips" are unknown in America. This statement is utterly unfounded. There is, as I have said, no necessity for tipping on the railways, except in the single case of the Pullman car attendants; but in hotels the vicious English system has made very considerable way, although as yet the blackmail is not levied so systematically and shamelessly as it is on this side. It is, however, a very common thing for a person who is likely to be at a hotel for several days to tip one of the waiters well at the start; and, American human nature being very much like the English article, the payer of such a bribe may count with confidence on being specially well looked after at every meal. You are certainly never asked to "remember the waiter," although I have been asked to "remember the porter;" but there is beginning to be a tacit understanding between travellers and hotel servants, and I fear that before very long the nuisance will assume its English phase.

I have said that the inclusive charge at the Windsor is 5 dollars (21s) per day, and I met with no higher charge in any hotel I entered. My payments ranged, indeed, from 2½ to 5 dollars, the average being probably 4 dollars. Judged by the cost of other things, and taking into account the fine accommodation provided and the immense capital invested in the hotel buildings, these charges can hardly be called excessive. I was anxious to see some of the most famous hotels, or I might easily have reduced my average to about 3 dollars per day by going to second-class houses.

I PAY BARNUM A COMPLIMENT.

"The Greatest Show on Earth" was in Montreal while I was there, and the names of Barnum and Jumbo were staring in enormous letters from every dead wall and hoarding. It is quite in accordance with Barnum's proverbial modesty and regard for truth that he should contrast his show with similar concerns in *this* world only. Not knowing what the circuses and menageries in Venus, Jupiter, and the fixed stars may be like, he cautiously and simply claims to have the largest "on Earth;" and we may be certain that he would not have ventured even so far as this, had he not first sent agents to the North Pole, the centre of the "Dark Continent," and the mysterious interior of China, to make perfectly sure that none of them possess an establishment large enough to fill three long railway trains. Having thus raked the whole surface of the planet with a small-tooth comb and found nothing comparable to his own concern, he can talk about the "greatest show on Earth" without his conscience turning a hair. I met with the big show further on, where I had a better opportunity of judging of its vast proportions, and shall not say more about it in this connection; but this is the proper place to tell a little story about Barnum himself, who, unknown to me, was staying at the Windsor. It happened that, on the day of our arrival at Montreal, poor little Tom Thumb died. Now, as most people

know, Barnum and the famous dwarf did a good deal of "business" together when the latter first came out. Barnum, indeed, cleared large sums by exhibiting the little man. The showman no sooner heard of the dwarf's death than he telegraphed to the tiny widow a message full of sympathy and piety; and, mysteriously enough, this telegram appeared in large type in the Montreal papers next morning, just when Barnum and the show needed a new and telling advertisement there. I was standing in the hall of the Windsor, with the morning paper in my hand, talking to one of my fellow-passengers from the *Parisian*, when my eye lighted on Barnum's telegram. Turning to my companion, I said, "Just look here! The old humbug is trying the pious dodge by way of advertisement this time!" "Sh-sh-sh-sh!" whispered my companion, putting his finger on his lips and pointing over my shoulder; "there he stands, close to you!" I glanced round, and there he was, sure enough, within a dozen feet of me, standing with his back half turned towards mine. I could see enough of his profile to be certain that it was that of the worthy whose portrait, as large as a door, was posted all over the city. I can hardly doubt that Barnum had heard every word I said, but, so far as I could see, the look of good humour and self-satisfaction which habitually sits on his countenance was not in the slightest degree ruffled; and I remarked to my companion that, as the Showman had written of himself as a professor of humbug, he no doubt felt flattered rather than otherwise at my having credited him with being smart enough to make capital out of a pious message to a bereaved friend. Anyhow, the great Barnum did not "call me out," or manifest any desire to "make neat" of me, as the rough western miners are apt to threaten to do on much smaller provocation.

THE CITY OF MONTREAL.

The site of Montreal rises gradually from the level of the St. Lawrence, and the principal streets, which are of immense length, are parallel with the river and with each other. Towards the western corner of the city, the rise becomes rapid—too rapid, ultimately, to allow the ground to be laid out in regular streets. The streets accordingly give way to handsome villas and splendid mansions, rising one above another, and each surrounded by its own lawns and ornamental woods. At last, the slope becomes too steep for dwellings of any sort; it is, in fact, the side of a beautifully wooded eminence called The Mountain, or Mount Royal, which rises to a height of 750 feet above the river. It is from this eminence, whose French name is Mont Réal, that the city takes its name. The river frontage of Montreal is four miles long, and at some points the city extends nearly two miles inland. It is at present the largest, handsomest, and wealthiest city in the whole of British North America; but its vigorous western rival, Toronto, bids fair presently to run it very close in all that goes to make a great and prosperous city.

The first European visitor to the site of Montreal was the Frenchman Jacques Cartier, who arrived there in 1535. In 1642 arrived the first instalment of European settlers, and just one century later the original Indian name ("Hochelaga") gave place to the French one of "Ville Marie." This name, in due course of time, was replaced by the present one when the city came into British possession in 1761. Though Montreal was well peopled and fortified, it was captured by the Americans

under General Montgomery, in November, 1775, and held until the following summer. In 1779, Montreal contained about 7,000 inhabitants. In 1861, the population had increased to 90,323, and in 1880, to 140,747. The commerce of Montreal is very large, as, though it is 500 miles from the sea, its advantageous position at the head of ship-navigation on the St. Lawrence, and at the foot of the great chain of improved inland waters extending from the Lachine Canal to the western shores of Lake Superior, has made it the chief shipping-port of the Dominion of Canada. In 1880 its imports were valued at 37,103,869 dols., and its exports at 30,224,904 dols. Montreal is a great manufacturing city, and there is scarcely a branch of trade which is not represented there.

The public buildings and many of the private ones are very fine, bearing testimony to the wealth as well as the taste of the inhabitants. The Roman Catholic Cathedral of Notre Dame is the largest church on the North American Continent, although I am disposed to think its capacity, like that of most public buildings, is vastly exaggerated. The guides and guide-books say it will seat from 10,000 to 12,000 persons, but I should not care to be in it with 7,000 others. Still, a congregation of 7,000 is an immense one, and there can be no doubt that the building is exceptionally large. The Cathedral has a fine peal of bells, one single bell of which weighs above 14 tons. The chief thing I remember about the interior of the building is that it is over-decorated. The amount of painting and gilding is prodigious. But even this great church is to be surpassed by a new Catholic cathedral which has been begun on a site near the Windsor Hotel. This new building is to be on the plan of St. Peter's at Rome, and will cost a vast sum of money. When I was at Montreal, the works were suspended owing to a temporary lack of funds. There can be no doubt, however, that all the money required will be forthcoming in due time; for though Montreal is not so exclusively Catholic as Quebec, the Romanists constitute a large majority even there, and comprise among them many wealthy people. There are several other Catholic churches, one of them (the Jesuit Church in Bleury Street) having a very fine interior.

The Protestant Episcopal Cathedral (Christ Church) has a spire 224 feet in height, and is regarded as the most perfect specimen of English-Gothic architecture in America. The Presbyterians, Unitarians, Congregationalists, and Methodists also have handsome churches; and I need hardly add, after what I have said about the largeness of the Catholic population, that monasteries, nunneries, and hospitals more or less associated with those institutions, abound. The Court House, City Hall, Market, and principal banks are all remarkable for their handsome architecture. The McGill College is a fine educational establishment, occupying a splendid site on the slope of the Mountain. The private residences in the same part of the city, built of a greyish limestone, are beautiful in the extreme. Similar residences are found in large numbers on Sherbrooke Street, which is the Belgravia of Montreal. St. Catherine and Dorchester Streets, which are parallel with Sherbrooke, but somewhat nearer the centre of the city, are also more or less fashionable. It was on walking through these handsome suburbs in the upper part of Montreal that I was for the first time impressed with the amazing extent to which wealth is diffused in the New World; but at Montreal I was only on the threshold of that world.

"What about the roads of Montreal?" may be asked by somebody who remembers the very qualified praise I bestowed on those of Quebec. Well, it must be admitted that Montreal is in this respect a long way in advance of the sister city, and to one who is fresh from Quebec the roads at first sight appear excellent. But when they are compared with the streets of an English city, they must be pronounced very bad. They are neither so rocky as some of those at Quebec, nor so full of deep pit-falls as some others; but in the matter of cleanliness there is little to choose. Many of the streets of Montreal are filthy in the extreme. Whether they are ever cleaned is more than I can say, but they look as if they never were. And this look is not peculiar to Montreal. It is common to the majority of American cities. The roadways of the busy streets are almost everywhere covered with a thick coating of black mud. The city authorities dare not let this mud dry in the hot weather, for then it would change to a deep layer of impalpable dust, which the patient citizens would probably find utterly intolerable. The authorities, therefore, industriously water the filth morning, noon, and night, and it is consequently seldom met with in any drier form than that of a thick, sticky paste, while it is more often semi-liquid. Even in the driest weather, it splashes over the kerb-stones, over the boots of pedestrians, over the spider-like wheels of the private vehicles, up the telegraph poles, and, where the sidewalks are narrow, far up the walls of handsome business buildings and palatial hotels. The tram-car rails, which are usually very badly laid and maintained, are very often completely covered with the black, sticky paste, which is squeezed aside for a moment as a car passes and then lazily flows back till it finds its former level. Except at the street corners, where paved crossings are maintained in a more or less decent state, it is often impossible, even in the hottest weather, to cross the roadway without getting ankle-deep in the sooty slime. "But why don't they take the mud away, instead of everlastingly watering it?" somebody asks. I, also, have often asked the same question, and I am still waiting for an answer.

The foregoing description applies fairly enough to many of the streets of Montreal, but not to all of them, for an attempt is certainly made in some of the fashionable suburban roads to keep things a little more decent. But why all parts of a great and rich city should not be kept clean is a question which I cannot answer. There must be municipal corruption or municipal mismanagement on a grand scale, wherever the first duties of a city government are neglected in the disgraceful manner I have described. But, as I remarked with reference to the streets at Quebec, the patience and forbearance of the citizens are inexplicable. The fault is clearly the people's own. Somebody has said that every nation has as good a government as it deserves, and the doctrine has a good deal to say for itself. Whether it is entirely sound or not, it cannot be doubted that every self-governed city has as good streets as it deserves.

THE VICTORIA BRIDGE.

The grandest and most impressive thing at Montreal, apart, of course, from the natural features of the district, is the great bridge which carries the Grand Trunk Railway across the St. Lawrence. I remember what a fuss was made, when I was a boy, over Stephenson's (then) greatest feat—the throwing of the Britannia Bridge over the Menai Straits for the Chester and Holy-

head Railway. And that was undoubtedly a great feat in its day, 30 or 40 years ago, for the Britannia Bridge was the first erection in which the tubular form was adopted and subjected to a severe test on a large scale. The test was borne successfully, and from that time to this the Britannia Bridge has, without a moment's interruption, formed a link in the great highway which binds together the capital of the Empire and the capital of Ireland. The tubular principle has been since adopted in the construction of bridges all over the world, but in no case has it been applied on so gigantic a scale as at the Victoria Bridge at Montreal.

This wonderful erection is simply the Britannia Bridge enormously lengthened. Instead of consisting of only three spans, as does its humble mother in North Wales, the Victoria Bridge consists of no less than 24 spans, each span forming a distinct length of tube. The number of piers is 23, without counting the two terminal abutments. The total length of the bridge is 9,194 feet, or more than a mile and three-quarters. Fancy a Britannia Bridge nearly two miles long, and you have some conception of what the Victoria Bridge is like. The iron tube through which the trains pass is 22 feet high and 16 feet wide. There are three millions of cubic feet of masonry in the piers and abutments, and 8,000 tons of iron in the tubes. The central span is 330 feet and the others are 242 feet each. The height of the bottom of the tube above the summer level of the river is 60 feet in mid-stream. The whole of the work was accomplished between Midsummer, 1834, and Christmas, 1859. The engineer was Robert Stephenson, the designer of the Pritannia Bridge and the son of George Stephenson, the inventor and constructor of the first railway locomotive which came into actual use. The total cost of the bridge was over six and a quarter millions of dollars. It was formally opened with much pomp and ceremony by the Prince of Wales during his visit to America in 1860.

It cannot be said that the appearance of the Victoria Bridge is picturesque. I am afraid, indeed, that, if Mr. Ruskin were to set eyes on it, he would be moved to curse it forthwith in immortal English, as defiling and uttering spoiling a grand natural prospect. But we are not all blessed with Mr. Ruskin's eyes, or with Mr. Ruskin's magic power over words; and to those of us who are common-place and matter-of-fact, that long and painfully straight hollow iron beam, resting on numerous pillars of masonry which were all turned out of the same mould, is a grand triumph of civilization and human skill over dead matter and blind force. Possibly it mars the landscape, but then it binds together great states; and, if you please, Mr. Ruskin, the utilitarian view of the matter must not be altogether lost sight of.

The piers of the bridge have a very lop-sided look which is at first very puzzling to the stranger. This appearance is due to the precautions which had to be adopted to protect the bridge from floating ice. The erection of such a bridge across an ordinary river would have been a mere matter of money, after the experience gained by Stephenson in North Wales. But the St. Lawrence is not an ordinary river. It is frozen over every winter to a depth of several feet, and it is, besides, the one outlet of a system of lakes in which, even if they are never frozen over, vast quantities of ice are regularly formed. The consequence is that, when the winter first sets in, as well as when the ice breaks up in the spring, the piers of the bridge are subjected to tremendous strains. I cannot do better than quote

from a work of Mr. Brassey's a description of the formation and breaking up of the ice. Mr. Brassey says:—

"Ice begins to form in the St. Lawrence in December. Thin ice first appears in quiet places, where the current is least felt. As winter advances, 'anchor,' or ground ice, comes down the stream in vast quantities. This anchor ice appears in rapid currents, and attaches itself to the rocks in the bed of the river, in the form of a spongy substance. Immense quantities accumulate in an inconceivably short time, increasing until the mass is several feet thick. A very slight thaw, even that produced by a bright sunshine at noon, disengages this mass, when, rising to the surface, it passes down the river with the current. This species of ice appears to grow only in the vicinity of rapids, or where the water has become aerated by the rapidity of the current. Anchor ice sometimes accumulates at the foot of the rapids in such quantities as to form a bar across the river, some miles in extent, keeping the water several feet above the ordinary level. The accumulation of ice continues for several weeks, until the river is quite full. This causes a general rising of the water, until large masses float, and moving farther down the river, unite with accumulations previously grounded, and thus form another barrier; 'packing' in places to a height of 20 or 30 feet. As the winter advances, the lakes become frozen over. The ice then ceases to come down, and the water in the river gradually subsides, till it finds its ordinary winter level, which is some 12 feet above its height in summer. The 'ice-bridge,' or solid field of ice across the river, becomes formed for the winter early in January. By the middle of March the sun becomes very powerful at mid-day, and the warm heavy rains rot the ice. The ice, when it becomes thus weakened, is easily broken up by the winds, particularly at those parts of the lakes where, from the great depth of water, they are not completely frozen over. This ice, coming down over the rapids, chokes up the channels again, and causes a rise of the river, as in early winter."

In order to prevent the rush of ice, which floats down in huge fields and piled-up masses, from injuring the bridge, each pier is protected by a long wedge-shaped cut-water extending many yards up stream. These cut-waters are immense masses of the most solid masonry, running out almost to a point. The extreme point is below the water; and the upper ridge, which is bevelled off to a sharp edge, rises gradually from the extreme point until it merges, at a considerable height above the surface, in the perpendicular part of the pier—that is, the pier proper, which sustains the bridge. I believe I am right in saying that the extreme points of the cut-waters are shod with iron.

Those who have followed this description will clearly see that the piers themselves are completely protected by these outlying cut-waters. If the centre of an ice floe strikes one of the points, its momentum is not immediately checked, as it would be by a straight, perpendicular wall. It is, on the contrary, allowed to expend its energy gradually in an attempt to run up the sharp, sloping ridge of the cut-water. But it seldom or never mounts to the top of the slope; for, long before it reaches that point, it either breaks up with its own weight and drops into the stream, half on one side and half on the other, or it loses its balance and slips off whole on one side. In either case, it passes on under the bridge, perfectly harmless. If an ice mass misses the point but strikes the oblique side of the cut-water, it is gently elbowed off from the line of the pier as the cut-water gradually widens out. In either case, the protection of the pier is perfect. The arrangement is a very simple one, but it is most effective.

A glance at a railway map of America will show the importance of the connection effected by this great bridge. It is, as I have before remarked, the only bridge of any sort which crosses the St. Lawrence

proper; and it is, apart from steamboats, the only connection between Canada and the States below Niagara—that is, over a distance of nearly 1,000 miles. It is, moreover, the only rail connection between the maritime provinces of the Dominion (Nova Scotia, New Brunswick, and Quebec) on the one hand, and the western provinces on the other. Without the Victoria Bridge, the railway system of Canada would be like a chain with a missing link. Vast as was the cost of the structure, the outlay was fully justified by the importance of the connections it was designed to supply. To Montreal the bridge has been of special advantage, for the city has been brought by it into direct communication with the whole of the Province of Quebec south of the river, with all six of the New England States, with the great States of New York and Pennsylvania, and, indeed, with all the Eastern and South-eastern parts of the Union.

ROUND THE MOUNTAIN.

The favourite drive at Montreal, and one which no visitor should miss, even if he is in the city only a day, is that known as "round the Mountain." The entire drive is about nine miles in length, and affords opportunities of seeing Mount Royal Park, Mount Royal Cemetery, and the superb panorama which the top of the Mountain commands. We duly took the drive, in the company of a gentleman resident in the city; but owing to the heavy rain which poured down pitilessly during the greater part of the journey, we saw nothing of the Park, and very much less than we wanted to see of the Cemetery. I have seldom seen such tremendous and persistent rain. Our driver shut up the carriage as close as possible, but the water found its way in in spite of all his efforts, and we were compelled to resort to our waterproofs. As for the driver himself, he appeared to be in imminent danger of being washed off his seat. But we had already discovered that, in the matter of weather, Montreal does nothing by halves. We had witnessed one of the heaviest thunder-storms I had ever seen in my life. The extremes of temperature to which the district is subject are notorious. We were told that, on the Sunday week before we arrived, the heat was so terrific that the inmates (all males) of certain boarding establishments simply "lay around" the house all day, attired in a single garment of the flimsiest material. The effort of continuing to exist was the only one of which they felt capable. How the members of mixed households survived we were not informed. But the weather goes just as far in the opposite direction in winter. The cold is then intense. The thermometer frequently marks 40° below zero, and has been known to go much lower. Ears, noses, and toes have to be carefully protected, or they are most unceremoniously nipped by Jack Frost. Winter is, however, less dreaded than a hot summer; skating, toboggoning, building ice palaces, and other seasonable winter amusements being extremely popular among all classes. Toboggoning, I ought perhaps to explain, is the game of sliding down an ice slope, at railroad speed, seated on a sort of miniature sledge. It is an exciting amusement, not altogether free from danger.

But I am digressing, and must return to the subject with which I started, the drive round the Mountain. It was amid the drenching rain I have very inadequately described that our driver, by many devious, zigzag ways, climbed the back of the hill and drove us through the Cemetery. I had often heard of the beauty

of American cemeteries, and the little I saw of this one at Montreal prepared me somewhat for the much larger and more beautiful ones which I visited further on. The cemeteries that fringe our large cities convey no idea whatever of the last resting-places of American citizens, and those of Paris are equally unlike them. The first thought which strikes one on entering an American cemetery is that those who laid it out had an unlimited supply of land at their disposal. This, of course, was the case, and the matter is one in which the Americans necessarily have the advantage over us. Instead of having to buy land at a price which is calculated by the yard or the foot, as any person or company must do who desire to establish a cemetery near a great English town, the American burial authorities have in most cases been able to acquire as many square miles as they might require either for nothing or for the merest trifle per acre. And they have taken care, while they were about it, to secure enough, for most of the cemeteries are of enormous size. Another thing which strikes the stranger is that the number of poor, cheap, plain monuments is wonderfully small. Almost everybody who dies appears to leave relatives with the means and the will to commemorate his virtues in marble. The ugly regulation "head-stone," which renders an average English grave-yard so hideous, is conspicuous by its absence, for those who cannot afford a really handsome monument to their departed friends appear to erect nothing at all. The result of the great abundance of land is that the cemeteries are never crowded. Instead of the interminable rows of graves, packed as close together as books in a library, which render many of our large cemeteries so hideously monotonous, the American graves are scattered about in groups, with large patches of turf and wood between, in most picturesque confusion. Elegant and costly monuments rise in groups, here on the top of a steep eminence, there beside a natural or artificial lake, yonder from the midst of a beautiful grove. As the paths, the turf, the shrubs, and all the other features of the cemetery are generally kept in excellent order by dint of a most profuse expenditure, the effect is charming in the extreme. Personally, I think cremation the most rational, the safest, and the least repulsive mode of disposing of the dead; but if I am to be buried at all, nothing could possibly be better calculated to reconcile me to my fate than a sight of one of the great American cemeteries, coupled with a promise from my executors that that should be my own resting-place. It will be gathered from what I have said that the American burial authorities have selected the most picturesque sites available. This has evidently been the case in most instances. It would certainly have been impossible for the people of Montreal to find a more beautiful site naturally than that which they did select on the northern slope of their Mountain.

Having driven in and out, and round about, and up and down the cemetery, amid the drenching rain, until he seemed to have covered many miles, our coachman at last emerged into the woods which crown the summit of the Mountain, and pulled up in an open space, where some thoughtful "authorities" had built a refreshment house, and a staging from which to view the panorama. And what a panorama! The rain was obliging enough to cease to fall just as we reached the summit, and the peerless landscape was all the more charming for the million liquid diamonds which hung from the trees and the moisture which

glistened on ten thousand roofs. Immediately below us, on the steep slope of the Mountain, were scattered, one above another, the fine mansions and trim villas of the aristocracy of Montreal, the finest among many fine houses being that of Sir Hugh Allan, one of the great shipping firm of Allan Bros., who, by the way, has since died, if he was not then recently dead. Beyond the region of handsome residences, which thus girdled the hill and straggled up its side, lay the great city, stretching out to right and left, its numerous tall spires pointing skyward on every hand. Further off again was the mighty St. Lawrence, its widely-separated banks tied together by something which appeared at that distance little better than a thick cord, but which we knew to be the gigantic Victoria Bridge, of which I recently gave some account. From this distant standpoint, the insignificance of the bridge, when contrasted with the vast scale on which Nature had constructed her works, was finely brought out. And yet I could not forget that, tiny as the bridge was relatively, it constituted a splendid triumph of science and skill over blind physical force. Away to the right, where the river came into sight, we could distinctly see the rush, the foam, and the turmoil of the Lachine Rapids, the last and most remarkable of that series of rapid descents in the river of which I shall presently say more. Altogether, this view from the Mountain above Montreal was one of the finest and most impressive of the many sights I saw in the course of my long journey.

SHOOTING THE RAPIDS.

They have been "shot" daily, several months in every year, for at least forty years, and they appear none the worse for it. We "shot" them in our turn, and left them uninjured. But perhaps I had better explain at once that the shooting is not done with a gun, but by means of a steam-boat. "Shooting the rapids" is, in short, simply going down them on board a large and comfortable vessel.

First let me describe this section of the river. The St. Lawrence proper, as I need hardly explain, flows out of the north-east corner of Lake Ontario, and carries off the whole of the prodigious mass of water which has descended by way of Niagara from the four upper lakes—Superior, Michigan, Huron, and Erie. The river is of immense width on emerging from Ontario, and in the first 40 miles of its course is studded with no less than 1,692 islands of various sizes, shapes and appearances. This part of the river is known as the Lake of the Thousand Islands, and I hope shortly to say something about its exquisite beauty. At the lower end of the lake, the river gradually contracts to a width of about two miles, and for the next 50 miles it is comparatively uninteresting. There are, indeed, two small rapids in this section, known as the Gallopes and the Rapide de Plat; but the descents are so moderate that the boats go down under full steam, and the recollection of them is entirely effaced by the series of grander rapids which have to be "shot" lower down by all who go on to Montreal by boat. It was this lower series which we descended, and which I strongly advise all visitors to Canada by all means to see.

As our general course lay up the river, a little manoeuvring was needed to bring these rapids into our route. We had, in fact, to go a long way up the river bank by rail, and then return to Montreal down the rapids by boat. Then, in order to "work in" the

Thousand Islands, which should on no account be missed, we returned to the river after seeing Ottawa, and took boat for Toronto at Brockville, which is situated at the lower end of the Lake of the Thousand Islands. We thus managed to see the two most interesting parts of the river, and to miss the intermediate and less picturesque section.

We left Montreal in the morning by a train on the Grand Trunk Railway for a station called Wales, 77 miles distant. Most of the intermediate stations bore evidence in their names that the neighbouring settlements were French in nationality and Catholic as to faith. We passed Lachine (pronounced Lasheen, of course), Valois-ville, St. Anne, St. Dominique, Riviere Beaudette, and Coteau. But there was a sprinkling of English names; for, besides Wales (our terminus for the day), we found Beaconsfield, Lancaster, Summers-town, and Cornwall. Leaving Montreal at 7.40, we accomplished the 77 miles run to Wales in about three hours. This is a fair average speed for a Canadian railway. There are express trains which make somewhat better time, but the best of these do not stop at the wayside station where we wanted to alight. Wales, so far as we could see, consisted of the wooden shed dignified by the name of "station" or "depôt" and one solitary house. There were no Welshmen visible, and no sign of any such place as Llanfdechlyn-goedmawr. Two persons, however, alighted besides ourselves. One was a postman and the other a drummer (traveller) in the boot and shoe line. It was clear, therefore, that we had not strayed beyond the bounds of civilization. There were evidently people not far off who were accustomed to receive letters and to wear boots. This was encouraging, so far. But no St. Lawrence was visible, and the drummer, with whom we soon fell in, was as ignorant of the locality as we were. He, however, wanted, like ourselves, to reach Dickinson's Landing, a place on the river bank; and, guided solely by the light of nature, we walked away along a straight, dusty road, which never heard of M'Adam, and must be a quagmire after heavy rain. The drummer presently got within hail of the postman, who was emerging from a side path, and of him he inquired the way to the river. The postman's reply was of that brief, unsatisfactory character of which we afterwards had ample experience, but we gathered from it in a hazy fashion that we were on the right road; and the drummer, denouncing the postman as a "surly cuss," led on. We followed, and very soon the great river came in sight.

We found, on reaching the landing-place, that our steamer was not likely to be there for an hour or two, and we accordingly improved the time by making a determined, but I fear unsuccessful, attempt to convert the drummer to orthodox free-trade doctrines. Like most Canadians, he was a Protectionist of the most stiff-necked kind. The country, he said, was most prosperous under its new fiscal system. No manufactured articles could be imported either from Europe or the States without paying a very heavy import duty. The result was that Canada was beginning to make everything she wanted, and that the working classes in the towns had constant work and high wages. That "foreigners," whether Englishmen or Americans, should be allowed to "flood the Dominion" with cheap goods was, he held, an outrage, which ought to be strenuously resisted. On a man in this benighted state, depending for his living on one of the protected industries, my free-trade lessons had, of course, no effect;

and I had to leave him to the teachings of future experience, which, in due season, will demonstrate the folly of the policy now so popular among the Canadians as surely as their great river flows to the sea.

We had also some talk over a fence with a young farmer who was ploughing with a couple of well-fed horses between his rows of potatoes. The soil was deep, rich, and black, and not a stone was visible. The farmer, who was dressed exactly like a young English labourer, said that both the land and the house which stood upon it were his own. He was, he said, a Dutchman, though he talked excellent English, and he was taking things in a very leisurely way. But there was an air of supreme satisfaction about him, and an appearance of solid comfort about his surroundings. If he was really content (as he appeared to be) to be shut out from the world, and to make the passage of an occasional steamer on the river serve by way of variety to his somewhat monotonous existence, his lot was clearly not an unhappy one. It was past mid-day when our steamer hove in sight. And now for the actual "Shooting of the Rapids."

This is a business which, in my candid opinion, has been over-written. The amount of gush that has been wantonly wasted over it by an untold number of writers is prodigious. I am not now referring to what has been said about the scenery of the rapids, or the pleasant character of the trip. These cannot well be exaggerated. What I take exception to are those descriptions of the descent which represent it as a feat demanding almost as much courage as taking part in a forlorn hope. I have read accounts which spoke of the excitement and suspense of the passengers as painful and intense, and of the tears which flowed freely down the writers' and their fellow-travellers' cheeks. Judging from what I myself saw and felt, I take the liberty of saying that the greater part of this sort of writing is rubbish pure and undefiled. There is excitement, of course; but to all except the most nervous and unreasoning of mortals, it is a very pleasant excitement, which adds vastly to one's enjoyment of the trip. I use the word "unreasoning" advisedly. These rapids have been thus navigated daily by steamboats for at least 40 years, at all times when the river has been clear of ice, and hitherto the serious accidents have been very few. Some of the guide-books say there has never been one, but I have reason to think this is a mistake. At any rate, dangerous as the "shooting" process looks, experience has proved that the element of danger is extremely small. The pilots who steer the boats have by long experience obtained the most minute knowledge of every yard of the track, and a skill in guiding the vessels through the tortuous channels between the abounding rocks which appears almost superhuman. Every passenger knows all this; and, unless his reasoning faculties are completely controlled by his timidity, he feels that the danger is a great deal more apparent than real.

The distance from Dickinson's Landing, where we boarded the boat, to Montreal is between 80 and 90 miles, and in that distance the river falls about 200 feet. If this fall were spread evenly over the whole distance, it would at no point be excessive; but, as a matter of fact, there is little or no fall in some 50 miles of the journey. The descent of the whole 200 feet is accomplished within a total distance of 30 miles; and even within those 30 miles there are lengthy stretches in which the fall is comparatively slight. It will be

seen, therefore, that the descent at certain points is very great. There are six distinct rapids below Dickinson's Landing, viz., the Long Sault (pronounced "Long Sow"), the Coteau, the Cedars, the Split Rock, the Cascade, and the Lachine. I say they are "distinct" because they bear distinctive names, but, in reality, two or three of them follow so closely upon each other as to form a connected series.

It is easy enough, apart from the difficulty of steering, to take a vessel down these rapids. You have simply to get her fairly into the current, and no mortal power can then stop her until she has either dashed herself to pieces on a rock or reached the bottom of the descent. But, on the other hand, no mortal power can take a vessel up these watery hills. The most powerful steamer ever built would beat the water in vain if it made the attempt. The swift current is resistless. These rapids are, therefore, a complete bar to the navigation of the St. Lawrence; and as the St. Lawrence is the connecting link between the great lakes and the Atlantic, it has been found necessary to circumvent the river. Splendid canals have, therefore, been cut, here along one bank and there along the other, so that vessels may be able to give the go-by to the river wherever its fall is too rapid to allow of navigation. These canals are furnished with immense locks, by means of which vessels of considerable size may be lifted step by step up the whole 200 feet. The passenger steamers which daily shoot the rapids have, of course, to return this way; but the process is a tedious one, and few passengers care to waste their time over it. The boats, in fact, go down full and go up empty. The importance of these canals will be obvious to all who understand the geography of the northern part of the North American continent. From the most remote corners of the great lakes—from Chicago on Michigan and from Duluth on Superior—corn-laden vessels can sail to Buffalo, at the lower end of Lake Erie. Near there they enter the Welland Canal, and by that means give the go-by to Niagara Falls and get into Lake Ontario. From Ontario they either go direct down the St. Lawrence, through the series of canals already described, or cross the country by means of the Rideau Canal to the Ottawa River, and so on to the St. Lawrence, just above Montreal. By one or other of these routes—partly lake, partly canal, and partly river—vessels of several hundred tons burden can now sail direct from Chicago out into the Atlantic, and so to Liverpool or any other European port.

The boat enters the Long Sault Rapid a few minutes after leaving Dickinson's Landing. This rapid is nine miles in length, and its total fall is nearly 50 feet. Up to about the year 1840, it was not thought possible to navigate these rapids; but the direction taken by the timber rafts which constantly float down was then carefully noticed. A practicable channel was thus discovered, and soon afterwards the passage was attempted by steamboats, under the guidance of Indian pilots. From that time to this, the rapid has been regularly "shot."

As we approached the head of the Long Sault, there was considerable stir on board—not, so far as I could discover, because any considerable number of the passengers were alarmed, but because all—male and female alike—were desirous of securing positions from which to obtain a good view. The bow of the vessel—the part which would necessarily come to grief first if the boat ran on a rock—was

crowded. Chairs were at a premium, and those who could not obtain sitting accommodation were content to stand rather than retire to a less advantageous position. The beginning of the descent was very clearly marked. We could feel that the boat had been seized and was being hurried along by a power which, so far as those on board and all their machinery were concerned, was resistless. But I did not notice that the descent was so sudden and rapid that the river appeared to drop away from under the bows, while the stern was lifted out of the water. Judging from descriptions I have read, and from gorgeously-coloured pictures of the performance issued by the steamboat companies, that is what some imaginative people *have* seen at some time or other. The descent is, however, rapid enough for all whose demands for excitement are moderate. 't would probably be voted insufficient by one who had gone through a course of trapeze performances, of being fired out of a cannon, or of putting an empty head into the mouth of a lion with an empty stomach. But for my own taste, and apparently for the tastes of the majority of the passengers, the slight spice of risk involved in the trip afforded just excitement enough. Few things ever proved to me more truly enjoyable. In the first place, the sight was magnificent. The river, which is here of great width, is studded with islands, varying in size from a few square yards to many acres. Most of these are beautifully wooded, and the river eddies and boils around them in such a way as to convey the impression that they are inaccessible. This, however, is clearly not the case, as I saw, on some of them, solid buildings, harbours, signs of cultivation, and, if I remember rightly, parties of anglers. How communication is kept up with the shore I do not know. If islands were the only obstructions, the navigation would be sufficiently tortuous and intricate. But where there are no islands, the whole of the river bed is sown thickly with gigantic boulders, against which the torrent beats in wildest fury. It is the dodging of these numerous rocks that constitutes the ticklish part of the steersman's task. They are scattered about in the wildest confusion, and the boat has to pick her way among them in a fashion which might well be declared impossible by those who have never seen it done. Many of the rocks stand well above the water; but the majority of them (and these, of course, are the most dangerous) are below the surface. Their positions are, however, more or less clearly marked by the broken water above them, which is often lashed into foam by the obstructions which they offer to its regular flow. It happened that, when we went down the rapids, the river was unusually full. The purser of our boat told me, indeed, that he had never seen the water higher. This was all in our favour, as the dangerous rocks, of course, were more deeply submerged than usual. Even then, however, we frequently passed within a few feet of rocks which had apparently only a foot or two of water upon them. It must be remembered that these American river boats are constructed so as to "draw" very little water. They have no keel and are immensely wide, and the bottom is almost perfectly flat. With their characteristic humour, the Americans say their boats will float *wherever the ground is a little damp*. The bed of the St. Lawrence is something more than "a little damp;" but, as I have explained, it is at many points perilously shallow. The volume of water is prodigious. I am probably within the mark in saying that, if the water of one of the greatest of our European rivers—say the Rhine—were

poured into the same channel with the combined streams of all the rivers in the British Islands, the mass of water would be less than that which I saw skipping down the St. Lawrence rapids. But then the width of the St. Lawrence is proportionately great, and the water is, therefore, spread out thin wherever the current is rapid.

It is a fine study to watch the steersman. He stands at a wheel in a snug little house high up above the passengers' heads. He has an assistant, who also keeps a firm hold of the wheel. The necessity for this precaution is obvious. The steersman's hold might suddenly slip at a ticklish point, or a sudden illness might seize him. I believe there is also a spare wheel, which either man could instantly seize in case of accident to the one in use. Whether there is a second rudder I do not know. If there is not, there ought to be; for it is obvious that the whole living freight of the boat is absolutely dependent on the rudder during every moment of the passage; and the failure of the steering apparatus, even for a few seconds, would probably mean death to scores, perhaps to hundreds. But there is not the smallest anxiety visible on the faces of the officers. The captain, indeed, sits immediately in front of the steersman, where he has a clear view ahead; but his responsibility and his power are virtually non-existent for the time. The steersman is "boss" of the situation. Not for a single moment does he allow his fixed, steady gaze to be averted from the point for which he is making. He is well up out of reach of the crowd of passengers, and "talking to the man at the wheel" would be impossible, even if the captain were not on guard.

But see where the steersman is making for! He is surely mad! The boat is rushing along at railway speed, and going straight as an arrow for the perpendicular rocks that girdle yonder island!

No, he is not mad, as you will see presently. He has been the same road, never deviating a yard to right or left, a thousand times before; and there are marks, either natural or artificial, on every visible rock, which are as familiar to him as the street corners which we pass daily are to us. Watch him now! He tightens his grip on the wheel, and visibly prepares for a sudden movement. Exactly at the moment at which he comes abreast of some well-known landmark (or shall we say water-mark?) the wheel, worked by steersman and assistant jointly, whirls round a certain number of times, and is held firmly in the new position. The effect on the direction of the boat is instantaneous. Her bows are turned away from the rocks on which she appeared about to dash herself; but so close a shave is it that you might toss a penny (if you were in a land where there are any pennies) upon the island, as you glide past it with a smoothness and speed which must be experienced to be understood. This sort of manoeuvre is repeated over and over again, and every time it is seen that the object is to dodge some visible or hidden danger, in the shape of island, rock, or shallow.

I should like to be able to give some definite information as to the speed attained by the boat where the fall is greatest, but I can offer nothing more than a rough estimate, for I utterly disbelieve what the purser told us on this subject. That worthy officer took up a central position amid the group of passengers as we ran down each rapid, and dealt out to us, piecemeal, scraps of appropriate information in the style of the menagerie man who makes the round of the cages

at intervals to describe the beasts. Much of what he told us was, no doubt, accurate enough; but I humbly beg to be allowed to doubt his statement that these rapids run, at certain points, at the rate of 60 miles an hour. "A mile a minute" is a good round, easily understood, and easily-remembered figure, which, in these railroad days, we are accustomed to quote too much at random. It is a convenient figure to guess at, and I am disposed to think that our purser simply guessed at it, or repeated the guess of somebody else. My own opinion is that we were at times going at more than 30 miles an hour. The way in which the rocks and islands slipped by us—there is no better way of describing the process—was suggestive of half-a-mile a minute at least. But the margin between 30 and 60 is considerable.

✱ A short distance below the Cascades Rapid, the river widens out and forms the charming Lake St. Louis, 12 miles long and five wide. At the lower end of this lake, the River Ottawa adds its vast contribution to the mighty tide of the St. Lawrence. A remarkable phenomenon is seen at the confluence of the two rivers. The water of the Ottawa is apparently of a deep violet colour, and almost opaque, whereas that of the St. Lawrence is clear and transparent. The difference is very remarkable, and is, I presume, to be accounted for by some difference in the chemical constituents of the two waters. What is equally strange is that for a considerable distance the two streams refuse to mix. That of the Ottawa keeps to the left bank, and that of the main river to the right, and the line of demarcation is almost as clear and well-defined as if they were kept distinct by some solid barrier. They are finally shaken up together pretty effectually on the Lachine Rapids, the last of the series.

As we approached the head of these rapids, the boat stopped opposite a village inhabited mainly by Indians, and still known by its original Indian name, Caughnawaga. The object of the stoppage was to take up an old and experienced Indian pilot, who for many years has steered the boats down the Lachine Rapids, which are regarded as the most dangerous of the whole series. The mention of an Indian pilot conjured up images of copper-coloured men, with painted skins and nodding plumes, clad in dirty blankets, and armed with tomahawks and bows and arrows. The reality proved to be a totally different article. A boat came alongside with a somewhat aged but still hale and active man, wearing a rather shabby suit, a wideawake hat, and a pair of blue or darkened spectacles. He looked as if he had seen a good deal of exposure to weather; and if I had not been told he was an Indian, I should have said he was a broken-down English farmer. But, whoever or whatever he was, he had a keen eye, a steady hand, and a perfect knowledge of every inch of the rapid. He took his place at the wheel, the boat started, and in five minutes the mad waters once more had us in their grip. Once more the wonderful dodging hither and thither across the stream and back again began, the Indian pilot, like his predecessors at the wheel, keeping his eye steadily fixed, without cessation and almost without winking, now on one mark and now on another. The Lachine Rapid is not very long, but what it lacks in quantity it makes up in quality. The descent is very rapid and the bed very rocky, and the guidance of the boat demands the sleepless vigilance which it receives. But we made the passage in perfect safety, as tens of

thousands had done before us; and, steaming under the Victoria Bridge, we found ourselves in the early evening ashore at Montreal, whence we had started by rail in the morning.

ROBBED FOR THE SECOND TIME.

Montreal was only the second city I visited, but I was there robbed for the second time. The hotel thieves there were more audacious even than those of Quebec. At the end of the splendid first-floor corridor of the Windsor Hotel, and close to the entrance to the grand dining-room already described, there was a set of long mahogany shelves, on which visitors placed their hats, &c., while they went in to dinner. A gentleman official of the superior-waiter tribe stood at the door constantly to usher people into the dining-room, and his eye was seldom off the hat shelves many seconds at a time. On going in to dine one day, my companion stood my umbrella upright against the end of the shelves and placed his hat on the top of the handle. There were few hats on the shelves at the time, for there were but few diners in the room; but when we came out, we found that the umbrella had disappeared, the hat having been taken off it and placed on one of the shelves. I at once called the attention of the man at the door to our loss, and explained that an engraved plate, bearing my name and full address, was screwed to the handle of the missing umbrella. He was certain that, under such circumstances, the umbrella had been taken away by mistake, and assured us that within an hour somebody would bring it back and ask for another. But, as there was no other left, I felt less sanguine than the gentlemanly door-keeper. As a matter of fact, the umbrella never did come back, and all the officials of the hotel declared that the robbery was a particularly daring one, and one of a kind which was extremely rare in that splendid and "high-class" house. The proprietors were not legally responsible for my loss, seeing that they provide a "coat-room" where umbrellas and such-like portable property may be deposited in the care of an attendant; and it is only fair to the manager to say that, when I was paying my bill, he threw me back a five-dollar bill (21s) with which to replace the lost article. Thinking that, if the thieves kept up the game during my whole journey as actively as they had begun it, I should have to buy a good many umbrellas, I decided to supply them with a somewhat inferior article. I therefore gave 2½ dollars (10s 6d) for one, and pocketed the balance of the 5-dollar bill. That half-guinea article, strange to say, the thieves let alone most severely, and I brought it home with me in triumph.

THE CANADIAN PACIFIC RAILROAD.

On the morning of Friday, July 20th, we left Montreal by the Canadian Pacific Railway for Ottawa, the seat of the Government of the Canadian Dominion. My advice to all who may be going in the same direction, and are not pressed for time, is to go by boat up the River Ottawa. A steamer runs daily, both morning and evening, between the two cities, passing through a great deal of very fine scenery. The well-known "Canadian Boat Song" was written with special reference to the Ottawa. But, as the song indicates, there are rapids on the river. These are not navigable, and the passengers have to be transferred more than once from boat to rail and back again from rail to boat. These changes make the voyage rather tedious.

It occupies, indeed, all day; and as we had not a whole day to spare, we went, as I have said, by rail. The distance is about 100 miles.

The railway we traversed is the extreme eastern section of what will be, when finished, one of the most wonderful arteries of communication in the world. Other lines, already completed, traverse the continent further south; but in every case they consist of several parts, owned and worked (or, as the Americans say, "operated") by different companies. The oldest of the Pacific lines commences at Omaha, on the Missouri River, and belongs to two separate companies—the Union Pacific, owning about 1,000 miles, from Omaha to Ogden, and the Central Pacific, owning the 800 or 900 miles, from Ogden to San Francisco. The Northern Pacific, only recently finished, does not come further east than Duluth, at the head of Lake Superior; while the Southern Pacific route is in the hands of at least three companies west of the Missouri. But the Canadian Pacific Company are constructing a line, which is to be owned and worked by themselves, all the way from Montreal to the Pacific coast of British Columbia. The Canadians have made great sacrifices to secure the completion of this splendid highway, which is to bind the whole Dominion together as it could be bound by no other means. The Dominion Parliament first gave the Company thirty millions of dollars and thirty millions of acres of the land lying along the route; and as more money was still needed, it has just decided to lend the Company over twenty millions of dollars more.

Starting from Montreal, the line runs up the left bank of the Ottawa River as far as Ottawa. There it crosses to the right bank and leaves the river for a time, but presently returns to it. On leaving it finally, a long way up the valley, it strikes westward through the immense and hitherto unexplored forests to the north of Lakes Huron and Superior. Thus it reaches Winnipeg, the new and vigorous capital of Manitoba. From Winnipeg it passes through a vast tract of rich virgin soil, which is being rapidly settled; and, crossing the Rocky Mountains at a great height, though by the lowest available pass, known by the elegant name of the Kicking-Horse Pass, it descends into British Columbia and so reaches the Pacific coast. The line is open from Montreal to some point far above Ottawa. It is also open from Thunder Bay (on Lake Superior) to Winnipeg, and from Winnipeg several hundred miles towards the Rocky Mountains. But two immense stretches are still unfinished, the longest being the section through the wooded wilderness to the north of the great lakes. There can, however, be no reasonable doubt that this great undertaking will be brought to a successful issue. It is a mere matter of money; and, having spent so much upon it, the Canadians are hardly likely to abandon a work of such vital importance even if a few millions more are wanted. The probability is that within two years trains will be running through from the quays at which the European steamers lie at Montreal, to the Pacific coast on the other side of the continent. The Company will then own the longest continuous line in the world. Emigrants will settle down on both sides of the track throughout its whole length, and in a very few years the Dominion will be bound together, from end to end, not by an iron track merely, but by an unbroken chain of humanity.

OTTAWA.

Ottawa is the political capital of the Dominion of Canada—the great Confederation which comprises the

whole of British North America, except Newfoundland. That inhospitable, fishy island still holds aloof, and continues to "paddle its own canoe." I have already said enough to indicate that Ottawa is by no means the largest of Canadian cities. Compared with Toronto and Montreal, it is still an insignificant place, and it was probably partly due to its insignificance that it was selected as the federal capital. It was originally known as Bytown—a name which was given to it in honour of Col. By, of the Royal Engineers; and it was not until 1854 that it was incorporated as a city under the name of Ottawa. When the various provinces of British North America (with the one exception already named) were confederated in 1858, there was, naturally enough, a dispute as to where the federal government should be located. Montreal thought there could be no question that her own claims were paramount. Toronto thought the same with respect to the claims of Toronto. Quebec asked to be constituted the capital on the ground of her fine position, considerable importance, and (for America) venerable age. Kingston, too, was a candidate, and I am not sure that I have exhausted the list. Ottawa, a new, rough, unlikened-cub of a place, away on the borders of the primeval forest, was apparently "not in it"—(sporting phrase, I think). I believe it thought so modestly of itself as not even to set up a claim. Now, see what blessed results came of humbly taking a back seat! The claims of the larger cities were urged so persistently and clamorously that the task of selecting from among them became a very invidious one, which Ministers were reluctant to tackle. They accordingly had a happy thought. "Let's ask the Queen to do it," they said among themselves. "These clamorous communities will know that she has no private axe to grind" (Yankee for "personal end to serve"), "and they will accordingly submit to her decision with a good grace." And so the thing was done. The Queen duly considered the claims of all the cities. As she (metaphorically) reviewed the candidates, Montreal, Quebec, Kingston, Toronto, and the other ambitious claimants struggled to the front. But, looking over their heads, Her Majesty saw young and modest Ottawa far off in the background, almost too diffident to entertain a hope; and, after the manner of the host mentioned in a well-known exhortation, she said, "Friend Ottawa, come up higher." So Ottawa took the front seat, and each disappointed claimant swallowed his chagrin in consideration of the fact that all his rivals were equally disappointed, and that the prize had fallen to a "rank outsider." (I feel I am getting on in the matter of sporting phraseology.)

It may seem strange at first sight that the Queen should have ignored the undoubted claims of the large cities, situated, as they are, on the great watery highway which binds the colonies together, and pitched upon a poor, rough, out-of-the-way place like Ottawa, which was still (so to speak) in its cradle. But the Queen and her advisers had, no doubt, good reasons for their choice. Experience has shown that a large city is not the most desirable place for the seat of government. The history of France would probably have been less marked by sudden and violent changes if its Legislature had always sat in some town of moderate size, instead of amidst the teeming and turbulent population of the greatest city on the Continent. The founders of the American Republic very wisely refused to locate the Federal Government either in New York or in Boston. They selected a place which was then of no importance,

and made it independent of all the State Governments. Many of the States have adopted the same plan, so far as the selection of small towns for their capitals is concerned. Albany, and not New York City, is the capital of the State of New York. The capital of Illinois is Springfield, and not Chicago; that of California is Sacramento, and not San Francisco. The capital of Ohio is Columbus, and not Cincinnati or Cleveland; while the Legislature of Michigan sits at Lansing, and not at Detroit. This list might be greatly extended. In selecting Ottawa as the capital of the Dominion, the Queen was no doubt influenced by a desire to choose a comparatively small place, occupying an eligible site, and at the same time to avert the outbreak of jealousy which the selection of either of the principal claimants would have provoked.

The site is, indeed, a splendid one—or rather, I should say, it *was*, for its picturesque features are rapidly being spoiled. The city is on the right bank of the Ottawa River, just at the point where it forms the Chaudière Falls, 200 feet wide and 40 feet high. In a state of nature, these falls must have been very fine, but they can now be hardly said to exist at all. For they have been made the centre of lumbering operations on a vast scale. The fall has, in short, been turned into "power." Immense saw-mills take the water in vast quantities above the cascade, make it do the work of thousands of horses, and pour it out into the river channel lower down. After a period of drought, nearly the whole of the stream is thus diverted from its course and turned into the slave of humanity, and only a fraction of it is left to trickle over the rocky precipice down which the whole mass used to tumble. In the rainy season, there is, no doubt, enough water for both falls and mills. But I saw the falls in a dry season, and it was clear that their beauty and impressiveness were then greatly impaired by the diminution of their volume. The banks of the river are, moreover, crowded with saw-mills and their accessory buildings, and with timber yards where deals, boards, shingles (coverings for roofs in place of slates) are stacked literally by the acre. The whirr and buzz of the many revolving saws drown all other sounds, and are heard at long distances. Lumber is omnipresent—piled in the yards, floating along miniature canals, stacked in huge loads on trucks, ground to splinters and mud beneath the feet of men and horses. The purely "practical" man—the utilitarian who sees nothing but his own side of things—must rejoice to see a great natural force, such as that generated by a waterfall, turned into a useful servant; but, interested as I am in such triumphs of skill, I confess it is not without a pang that I see a fine natural scene spoiled for ever.

This is perhaps an appropriate time and place to say a little about lumbering operations generally. Lumbering is, of course, the procuring of timber from the forests, and the conversion of it into materials for building and similar purposes. There are in Canada and the States a set of men who act as viewers or prospectors for lumber merchants. These men are skilled in the art of estimating the quantities of timber of various kinds which may be cut on any given area, and the cost of transporting it to the banks of the streams. When a lumber merchant wishes to purchase the timber in a particular section of the forest, he sends one of these skilled viewers to look at it, and on his report the merchant bases his opinion as to what he may safely offer. Sometimes he buys many square

miles of forest merely for the sake of the timber. Having cut and carried away all he thinks worth taking, he sells the land, if he can; and if he cannot, he perhaps abandons it, rather than pay the taxes on it, and the Government presently sells it again. The value of the timber on any given site depends largely on the character of the rivers. If the district possesses streams conveniently placed, which, at some season or other, are large enough to float large logs down to the place where they are to be cut up, the timber is far more valuable than that of a district where there are no streams, or where they are insignificant in size. Indeed, where there are no rivers, the forest often remains untouched until the land is required for agricultural purposes.

The transportation of the timber to the saw-mills is apparently a very simple process. The trees are cut down, marked with a distinctive mark, and thrown into the nearest stream. The stream carries the logs down to the river into which its waters are discharged, and the river bears them onward to their destination. The particular mark upon them indicates their rightful owner. The streams of Canada and of the forest districts in the United States are largely employed in this carrying business every season. There are, of course, no roads in these remote districts; and if roads had to be constructed specially for the timber to be carried over, it is clear that the cost of "lumber" would be enormously increased. The floating-down of the logs is not, however, quite such plain sailing as may be supposed. Sometimes, through want of water, or the presence of obstructions in the bed of the stream, or it may be its winding character, the timber gets stopped and forms a great block known as a "boom." To break up the "boom" and set the vast mass of timber moving again is sometimes a work of immense difficulty, and men have to be constantly on the watch during the season to prevent such accumulations whenever possible. Hundreds of thousands of cubic feet of timber sometimes accumulate before the boom can be induced to "move on."

The destruction of the forests has of late years been proceeding at such a rapid and rapidly-increasing rate that the Americans are at last getting alarmed. It is seen that, vast as the forests are, the time is coming when there will be an absolute scarcity of wood, unless steps are taken to replace, by judicious planting, the trees which are being destroyed. Canada has still an immense area of virgin forest; and some of the States—notably Texas, Florida, Maine, Michigan, and one or two others—are almost equally well supplied. But the consumption of wood for fuel, for building, for railways, telegraphs, sidewalks in towns, and a hundred other purposes, to say nothing of the export trade, is so vast, and is so constantly on the increase, that the word "inexhaustible" can no longer be applied to the resources even of the most heavily-timbered States. Many of the States are almost entirely devoid of forests, and these, of course, have to obtain their supplies of timber from their neighbours.

THE GOVERNMENT BUILDINGS AT OTTAWA.

On an eminence 150 feet above the river, from which it rises abruptly,—almost perpendicularly, indeed,—stands one of the finest and most costly groups of buildings on the American Continent. These are the Dominion Government Buildings, which have been erected at a cost of nearly a million pounds sterling.

It must be admitted that the Canadians have, in this instance, something to show for their vast outlay. The group is a magnificent one, and the site is superb. The situation is apparently the highest in the city, and the hill (popularly known as Barrack Hill) is appropriately crowned. Here we see once more the advantages possessed by architects in a country where land for public purposes can be had for the asking. When a great public building is required in the midst of an old European city, where land is doled out for such purposes by the square foot, the designer has to crowd the *maximum* of accommodation into the *minimum* of space. And if, under such untoward circumstances, he does contrive to produce an effective and beautiful design, the chances are that nobody can see his building to advantage when it is up. The citizens may see a gable as they approach it from one narrow street, or a doorway as they come upon it from another direction, or, at the risk of dislocating their necks, may perchance, be able, from a single point of view, to take in the full height of a tower. But of the design of the architect as a whole they can by no possibility obtain an adequate conception, unless they consent to clear away acres of the dwellings amid which the great edifice is buried. The case of the Government Buildings at Ottawa is the exact reverse of this. The site is, as I have said, higher than that of the city itself, and the space at the disposal of the architects was so vast that the whole group can be seen, as a whole, from every point of view, and from a considerable distance. European architects and archaeologists would, of course, refuse to allow this brand-new pile to be mentioned in the same breath with the great and ancient buildings of the Old World; but possibly by the time Ottawa is two or three centuries old, its Parliament House may have become to the American archaeologist what the cathedral churches of Cologne, of Milan, and of Strasbourg are to the cultivated European of to-day. Even now, whatever the architectural merits or demerits of the Ottawa group may be,—and this is a subject on which my opinion is probably worth very little—I can safely say that, to all persons constituted in any way like myself, the buildings in question cannot fail to appear beautiful and impressive in the extreme.

The group forms three sides of an immense quadrangle, of which the south side, facing the city, consists of the Parliament Houses and their associated offices. The other two sides of the quadrangle are formed by the buildings used by the various Government Departments, the Post-office, &c. The Parliament House block has a frontage towards the street (but a good long way from it) of 472 feet, and an extreme depth of 572 feet. The eastern block measures 318 ft. by 253 ft., and the western block 211 by 277. The buildings are in the Italian-Gothic style, of cream-coloured sandstone. The arches of the doors and windows are of red Potsdam sandstone, the external ornamental work of Ohio sandstone, and the columns and arches of the legislative chambers of marble. The roofs are covered with green and purple slates, and the pinnacles are ornamented with elaborate iron trellis-work. The legislative chambers are spacious and richly furnished, and have stained glass windows. The Senate Hall is reached to the right from the main entrance (which is under the central tower). The viceregal canopy and throne are at one end of this hall, and at the other are a marble statue and a portrait of Queen Victoria, together with full-length portraits of George III. and Queen Charlotte by Sir Joshua Reynolds. The Chamber of Commons is

reached to the left from the entrance, and contains some beautiful marble columns and arches. In these groups of buildings are concentrated all the Legislative and all the Executive departments of the Dominion Government. We should have a similar group, but a still vaster one, in London, if the Houses of Parliament, the War Office, the Horse Guards, the Treasury, the Admiralty, the Home, Colonial, Foreign, and India Offices, and the various departments domiciled at Whitehall and Somerset House, were all brought together into one immense assemblage of palaces. This we shall hardly see, unless we can make up our minds to "wipe out" Westminster and Parliament Street and begin again.

One of the most interesting features of the Ottawa group, whether regarded internally or externally, is the Parliament Library. This is a handsome octagonal building, and contains at present about 40,000 volumes. That is no great thing beside the million and a quarter volumes of our British Museum Library. But then London is somewhat older than Ottawa, and Great Britain more prolific of literature than Canada. Ottawa has, however, made a very respectable beginning, and may possibly run a future generation of Englishmen rather close. Indeed, in this stately pile of buildings, the Canadians have discounted the future pretty liberally. They have built for posterity. The legislation and business of the Federal Government of four millions of people (barely the population of London) might, no doubt, have been very efficiently managed in a less imposing and costly group of palaces; but the Canadians have faith in their future, and have wisely provided for it. They have accomplished the metaphorical feat of taking Time by the forelock; and if they hold on hard, they will no doubt get on the halter or the bridle in due time. (I assume, of course, that getting hold of Time's forelock is a "hossy" kind of feat, and is only preliminary to harnessing.)

The immense vacant space round the buildings is laid out in terraces at various levels, and the total area of beautiful turf is immense. At one or two points where the finest views of the river and the vast panorama are obtained, the thoughtful authorities have provided covered seats, where the visitor can find shelter from sun and rain alike while he "views the landscape o'er." Before the lumbermen appropriated the Chaudière Falls, they (the Falls, not the lumbermen) must have been seen to great advantage from this commanding spot; but what little there is left of them now is almost hidden by their wooden surroundings. The best near view of the Falls is now obtained from a suspension bridge which crosses the river immediately below them.

Of the city of Ottawa itself, there is not much to be said. It contains about 23,000 inhabitants, and, as it is the political capital of the Dominion and a trading centre of growing importance, its population is rapidly increasing. But, like all American towns of the same kind, it looks rough and unfinished. It will take a great deal of licking into shape, but it will no doubt be shapely enough some day. At present, it is certainly not an attractive place, apart from its natural features and its magnificent group of Government buildings. Its position is a commanding one, regarded from a commercial point of view. It is on the main line of the Canadian Pacific Railway, and it has the advantage of two other railway connections with the St. Lawrence—viz., at Prescott and at Brockville respectively. It is, moreover, the point at which the Rideau Canal enters the Ottawa River, which is thus connected with Lake Ontario at Kingston,

Rideau Hall, the official residence of the Governor-General of Canada, is at New Edinburgh, on the north bank of the Ottawa. Judging from what I saw of the building at a distance, I should say it is not a very attractive place. Princess Louise, the wife of the late Governor-General (the Marquis of Lorne), is said to have got rather tired both of it and of Ottawa. This is not very surprising. Rideau Hall is a poor substitute for Windsor, and Ottawa has not yet much in common with the West-end, or, indeed, any other end, of London.

BROCKVILLE AND BARNUM.

Having duly "done" the Ottawa Parliament Houses, under the guidance of the resident housekeeper (or janitor, as the Americans call such an official); having, moreover, seen the remnant of the Falls, the lumber-mills, and the few other objects of interest that were on view; and, lastly but not leastly (I have grave doubts about the accuracy of that last adverb), having dined at the principal hotel (the Russell House), where our meal was shared by flies innumerable, we returned to the station and took train for Brockville, on the St. Lawrence, distant about 90 miles. For some time after starting, we were still following the main line of the Canadian Pacific Railway, which thus leaves the Ottawa River almost at right angles. On reaching a junction station called Carleton, the main line and the Brockville branch diverge from each other. The former turns sharply to the right and returns to the valley of the Ottawa, while the latter takes the opposite direction—south-east by south. The journey was not productive of very much in the way of incident. The country we passed through was generally cleared, but appeared to be very sparsely populated. The most important place on the road bore the prosaic and very English name of Smith's Falls. The speed was very slow. The stoppages were numerous, and apparently much longer than usual, in consequence of our having to pass, on the single line, several long trains filled with excursionists. These had been to Brockville to see "The Greatest Show on Earth," including "poor old Jumbo," whose honoured name was on every tongue. Barnum & Co., who had left Montreal on the Wednesday night, had exhibited in Ottawa on Thursday, and had gone thence to Brockville during Thursday night. When we learnt that they would be giving a second performance at Brockville about the time we were due there, and when we remembered that the place was a small one, with limited hotel accommodation, and that we had not written ahead to arrange for beds, we began to be exercised seriously as to our prospects of finding a place whereon to lay our heads for the night. And this anxiety proved to be fully justified.

It was nine or ten o'clock when we reached Brockville, to find the whole population of the place divided into two parties. One detachment of them was attending the performance at the big show, and the "balance" as besieging the railway station, to see the show start for Kingston, where it was to be exhibited next day. I am making no mistake in saying that the performance and the despatch of the huge establishment were proceeding at the same time. Such was the actual fact. The show consists of three parts—first, the collection of large uncaged animals, such as elephants, giraffes, camels, &c.; secondly, the caged beasts; thirdly, the huge hippodrome or circus. Each of these departments has an immense oval-shaped tent to itself, but all three are so built as to communicate with each

other. The sight-seers enter by way of the elephant and camel tent, pass thence to the caged beast menagerie, and ultimately reach the great circus. The vast tent contains four rings, in all of which feats of horsemanship, tumbling, and other performances of the usual circus kind, are going on at one and the same time. The tiers of seats which surround this tent provide accommodation for no less than 16,000 persons! Verily, the "biggest show on earth"—since the close of the last "season" at the Coliseum at Rome! As soon as the evening performance commences in the circus, workmen begin to break up the two menagerie departments, and in a very short time the great caravans containing the beasts are on their way to the railway station. When we reached the Brockville depot, they were arriving in rapid succession, and as fast as they arrived they were drawn up an inclined plane to the level of the flat railway trucks which were waiting to receive them. Even these trucks, or "flats," belong to Barnum's firm, and they are admirably adapted to their purpose. I should be afraid to say how many of them there are; but this I know, that they make four long trains, which together are nearly a mile in length. I remarked to one of the officials at Brockville Station that he and his staff must have their hands full, with such a big job on hand. "Not at all!" he replied. "We have nothing whatever to do with the affair but to find engine power. The trucks, the horses, and the men employed in the transfer, are all Barnum's." The work of loading and despatch was done with all the precision, noiselessness, and smoothness of a well made and well-oiled machine. Every van, every horse, and every man appeared to have his or its place, and to fall into that place with all the certainty with which the teeth of one cog-wheel fall between those of its fellow. Long before the evening performance was over, the first of the four long trains was well on its way to Kingston, if, indeed, the second had not started also. Soon after midnight, the last fragments of the circus tent were cleared away, and early next morning the whole establishment was on the selected ground at Kingston. A certain number of the workmen travel with each section. They are provided with cars in which they can take their rest on the road. As the show seldom stays in any but the largest cities more than a single day, this is almost the only rest they get between Sunday and Sunday.

This vast establishment is stationed at New York during the winter, but during the whole of the summer and autumn season—from May to October—it is "on the wing," visiting during that time about 140 cities and towns. No important town is omitted from the list, the show going as far south as Galveston (Texas), as far west as Omaha (Nebraska), and, as we have seen, as far north as Ottawa. At Philadelphia, Boston, and a few of the other great cities, they stop for a few days, but one day in each place is the usual length of the visit. An "advertising car" travels in advance, carrying agents, the "paste brigade," tons of bills, programmes, lithographs, and so on. At each town two performances are given during the day, one in the afternoon and the second in the evening, which is over by eleven o'clock. There are 700 people employed, including all the performers, the acrobats, riders, gymnasts, giants, dwarfs, the "wild men," and the monstrosities. The horses number 400, and the elephants 30. Then comes the menagerie of lions, tigers, leopards

—the caged beasts, in fact—the camels, dromedaries, giraffes, zebras, and such like. Besides all these are the trappings, the chariots, the wardrobes, and odds-and-ends innumerable. The receipts of a six days' stay in Boston in 1882 were nearly £15,000, those in a single day amounting to £3,148. In ten days the total sum taken was £21,600. The receipts of the first week of the New York establishment were \$5,220, of the second \$1,700. —making in 12 days 107,000 dols. The daily expenses of the travelling show, rain or shine, during the season of 1882, are estimated at 4,800 dols., or 28,800 dols. per week. The receipts for the same period averaged 9,168 dols. each day, or 55,000 dols. per week. Mr. Barnum calculates that he has had the patronage of over ninety millions of people during his long career.

A NIGHT AT BROCKVILLE.

The day before we reached Brockville, the great rowing match between Hanlon, the champion, and some other famous oarsman, took place on the St. Lawrence close to the town, and the sight-seers and loafers who had come into the place to witness it had apparently made a second day of it by staying to see Barnum's big show. At any rate, between the rowing match and the visit of Jumbo, the place was for the time entirely demoralized. The hotels, which are neither numerous nor large, were crowded with noisy visitors, who had evidently discovered sources of excitement outside the show. The prospect of getting beds was at first not very encouraging; but presently one of the railway porters took pity on us, and led us off to a distant hotel called, if my memory serves me faithfully, the St. Lawrence Hall. There was clearly some private understanding between the porter and the landlord as to the division of the spoil. However, we were in no mood to be over-critical; so, in spite of the numerous rough-looking people hanging about the place, we readily accepted the only room available—a double-bedded one close to the top of the first flight of stairs. Having duly deposited our belongings there and carefully locked the door, we asked for supper. There was none to be had. Barnum's patrons had cleared out the place, and the hotel cupboard was as bare as the one commemorated in the tragical tale of Mother Hubbard. But having dined at far-off Ottawa, and had a long and tedious journey since, we were bound to find something to eat, even if we stole it; so we sallied out on a foraging expedition. We drew nothing but blanks, however, till we reached a distant part of the town. There, at last, we found a really handsome restaurant; but the door was besieged by such a ravenous crowd of country people fresh from the big show, that the proprietor had to admit us by instalments. Our turn came in due course; and, having had a decent supper, we returned to the St. Lawrence Hall, and retired to bed—to bed, but not to sleep. Either there is no Early-closing Act in force in the Province of Ontario, or else our host had secured a license for a few "extra hours" on the occasion of Barnum's visit; or, lastly and most probably, the law (whatever it was) was simply ignored. Anyhow, the St. Lawrence Hall did not close early on that night. The place was full of rough, heavy-booted, loud-talking men, whose conversation grew louder and more quarrelsome as the night advanced. They appeared to be occupying rooms in different parts of the house, but going to bed was clearly no part of their

night's programme. They stumped up and down the uncarpeted stairs continuously, and for some reason which we failed to guess, for two or three hours. Occasionally, a number of them assembled in the room immediately over ours, which appeared to be a favourite rendezvous, and there they carried on conversations and quarrels in tones which must have proceeded from throats of brass. Sometimes their verbal differences ended in a scuffle, and at last a heavy fall, which threatened to precipitate the whole party through the shaky floor upon our beds, indicated that at least one had been placed *hors de combat*. I listened in instant expectation of hearing pistol shots, but apparently the fight did not go beyond fisticuffs, for nothing more serious followed. To attempt to sleep beneath such a Pandemonium was like trying to do the same thing under a room in which a dozen carpenters are laying a floor. We gave up the attempt, and, having assured ourselves that our door was as safe as a rather crazy lock could make it, we quietly awaited developments. It was with a sense of intense relief that, between two and three o'clock, we heard an omnibus or two back up against the door of the hotel. A conductor entered the hall and shouted: "Omnibus for Grand Trunk train to Kingston and Toronto. All aboard!"—this last expression forming a sort of prolonged and melancholy closing whoop, as difficult to imitate as the unearthly shriek of the London milkman. The noisy guests had evidently been waiting for this announcement, for they at once descended into the hall like an avalanche. Judging from the sounds which came up to us, they took a good deal of stowing away; but at last they were all got in, and the 'bus or 'busses drove away to the depot. From that time forth, the hotel was tolerably quiet; but, after so exciting an episode, we were not in a very sleepy mood. We rose early, but only to gain some further experience of the hotel's "accommodations"—(the Americans always make this word plural in such a connection). It was, on the whole, the most disagreeable place we got into during our whole journey. After a very unsatisfactory breakfast, which was shared by myriads of flies, we turned out and impatiently awaited the 'bus which was to take us to the boat.

As I stood waiting on the steps of the hotel—a house, I may say, in which the bar trade formed a far more prominent element than it does in most American hotels—a seedy-looking, bleary-eyed man of the tramp species approached and asked me for a drink. He evidently thought I was "loafing around" the bar (to adopt an American expression), and that fellow-feeling would prompt me to grant his request. I hinted to him, as gently as I knew how, that I thought he had had enough drink within the past twenty-four hours, and suggested that, perhaps, some food would do him more good at that moment. With the remark that liquor was to him "both victuals and drink," he put on an aggrieved and disappointed look, and went away in search of a more sympathetic soul. I mention this trifling incident because, with one exception, this was the only instance in which I was accosted by a beggar during the whole of my journey. The other case occurred in New York, where a man who said he was a locksmith out of work, and who was clearly hard-up, managed to get a small coin out of me. It may be safely asserted that nobody could spend three months in exploring any

European country—mainly its great cities—without meeting with more than two beggars.

It occurs to me, at this point, that I have overlooked one entire class of cadgers. The wretched Indians who hang about the railway stations in the Far West beg of the passengers on every train; but I suppose it is hardly necessary to take into account this miserable remnant of a perishing race, when generalizing on what Americans and Canadians do or do not do. Nobody would now think of calling an Indian an "American." "Americans" are people of European descent. The aborigines have not only been displaced by the superior race, but they are not even included in the name applied generally to the inhabitants of the continent which was theirs but yesterday. This must appear to the Indians, if they ever reflect on their lot, to be rather "hard lines;" but perhaps some day they may develop an Indian Darwin, to explain to them and convince them of the beauty of the law of the "survival of the fittest."

But I must return for a moment to Brookville. As I have explained, my recollections of the place are not by any means of a pleasant character, and I have sometimes been rather disposed to speak of it as a gentleman who had lived some years at Port Said (the Mediterranean terminus of the Suez Canal) spoke of that town to me. I asked him what sort of a place it was, and he said it was "a nice place—a very nice place—to get out of." But, after all, Brookville may, for aught I know, be a decent sort of place. I was assured that it was by a person who certainly ought to know—viz., a gentleman who has long resided there, and who came from New York to Liverpool with me on board the *Germanic*. But the town is of no great importance. It contains perhaps 6,000 to 7,000 inhabitants, and the most interesting feature which I noticed about it was a large open square, on an eminence near the centre of the town, with a handsome church situated at each corner. We came across this square in the moonlight while hunting for a supper, and bestowed as much admiration upon it as two terribly hungry men could be expected to give. There must be a considerable trade done, in or near the town, in the manufacture of agricultural implements, for I saw immense numbers of reapers and other farm machines lying at the wharf for shipment. The agricultural-implement trade is, I may remark, an immense one in all parts of Canada and the States. The scarcity of hired labour compels farmers and housewives alike to adopt the most efficient of labour-saving machinery; and the breaking-up of new land for the growth of wheat and corn is going on so rapidly that the demand for new implements is incessant and enormous. The reader will, no doubt, regard my use of the words "wheat and corn" as peculiar, and may perhaps ask whether wheat is not corn. I may, therefore, as well explain here that in American phraseology wheat is not corn. By "corn" an American always means Indian corn, or maize, which is grown in prodigious quantities. "Corn" is never used, on the other side of the Atlantic, as a general name for cereals. It is necessary to bear this fact in mind if one would rightly understand the market reports of the newspapers and the current talk about agricultural produce.

THE THOUSAND ISLANDS.

After a long and tedious "wait" at the Brookville wharf, we were cheered by the sight of the Montreal and Toronto boat coming up the river, and in half-an-

hour we were entering the Lake of the Thousand Islands. This is simply an immensely-widened stretch of the river, or, to put the matter in another way, the narrowed lower end of Lake Ontario. The name of this remarkable sheet of water does not, of course, state the number of islands in the lake with arithmetical accuracy. It is a case of "round numbers;" but, unlike most cases of round numbers, there is no exaggeration of facts. The name, indeed, does less than justice to the fact, for there are actually 1,692 islands scattered over the 40 miles of the lake's length. The exact number was probably not known to the persons who acted as godfathers and godmothers to the lake, and gave it its name; for it is pretty certain that when it was christened it had never been surveyed, and nothing but the most careful survey could enable one to say within a hundred or two how many islands there are. The boundary line between Canada and the States passes through the centre of the lake, so that some of the islands are British territory while others form parts of the State of New York. The navigation is intricate in the extreme. It looks easy enough by daylight, for no great amount of skill is needed to steer clear of the islands. But the dangers do not consist of visible islands, but of invisible rocks and shoals. There are channels innumerable between the islands, but only a few of them are deep enough to be safe, and the pilots who navigate the lake must necessarily possess a most minute knowledge of all its ins and outs, and of all the marks and signals by which the regular course of vessels is indicated. The islands are of every imaginable size, shape, and appearance. Some are mere rocks, barely visible and only a few yards in length; others cover many acres, and some are several miles long. Some are simply masses of naked rock, without a trace of vegetation; others are thickly wooded to the very water's edge, displaying the richest of green foliage in the summer and the most gorgeous and varying of tints in the autumn. As the steamer picks her way through the tortuous channels, the enchanting scene changes with every passing moment. Each turn opens up new channels and groups the surrounding islands in fresh combinations, until the eye is literally wearied with the countless variations and the sustained and peerless beauty of the scene. There is nothing of the grand or the exciting about the scene—no mountains, or waterfalls, or rapids. The water flows calmly and noiselessly along its thousand channels; and the beauty of the islands consists in their shapes, their exquisite verdure, their beautiful and varied grouping, rather than in any of the bolder features of natural scenery. Nobody can fail to notice the wonderful cleanness of the rocks. There is none of the mud and sliminess which sometimes mar the beauty of rock and strand. The water is clear as crystal, and the islands, where it laps against their rocky sides, could hardly be cleaner if they were regularly scrubbed. The navigable channel is marked by numerous light-houses, which constitute a picturesque feature of the lake, notwithstanding their somewhat painful uniformity in the matters of shape and whitewash. In spite of lighthouses, buoys, and other fixed marks, it is clear that mishaps sometimes occur, for at one point, I saw, partly submerged, the bows of a small vessel which had apparently come to grief in an attempt to walk over a visible rock. The current is so gentle, and land of some sort is so easily accessible at every point, that such a mishap as befel this vessel probably involves very little risk to life. At any rate, it is

a very different thing from running on a rock in the rapids.

Some of the islands, especially near the American shore, have been secured by wealthy men, who have built upon them beautiful villas and mansions. Mr. Pullman, the head of the great car-making company which bears his name, is the owner of one of the most elegant of these. The boating is excellent, the fishing first-rate. Altogether, it is difficult to imagine a more delightful resort for a weary city man than one of these island residences, where the owner, if not literally monarch of all he surveys (for his survey comprises, perhaps, a hundred islands besides his own), is at least master of a very well-defined dominion, is surrounded by the purest air and the most enchanting scenery, and has within reach the most pleasant and wholesome of recreations. The New York millionaire may do, and sometimes does, far worse than buy one of the Thousand Islands to serve as his summer resort. But it is not millionaires only who feast on the beauties of this world-renowned lake. On the American shore, an important pleasure town has sprung up at Alexandria Bay. Here are two huge hotels (the Thousand Islands House and the Crossman House), which can take in and do for nearly 1,000 visitors between them. Besides these, there are many smaller and humbler places which find "accommodations" for visitors, and in the summer season they are all crowded. There are one or two other pleasure resorts on both the American and the Canadian sides, but they are "one-horse affairs." Alexandria Bay "takes the cake." (As I am writing about America, it is difficult sometimes to avoid lapsing into Americanese.)

KINGSTON.

Our boat called for an hour or two at Kingston, an attractive and prosperous Canadian town of about 14,000 inhabitants. Situated on the main line of the Grand Trunk Railway, about half-way between Montreal and Toronto, at the point where Lake Ontario ends and the Lake of the Thousand Islands begins, and at the southern entrance to the Rideau Canal, which connects it with the Ottawa River, Kingston occupies a very fine and commanding position, and it is somewhat surprising that it has not made greater progress in population and importance than it has hitherto done. As far as an outsider can judge, there is no more reason why the great port and mart of Lake Ontario should not have sprung up at Kingston than that they should have come into existence at Toronto. That there are some very good reasons why the site of Toronto was preferred, there can be no doubt, though perhaps they are not to be discovered except by those who have an intimate knowledge of the country.

As I before intimated, Barnum had preceded us to Kingston, and when we arrived in the place we found that the attentions of the Kingstonians were being keenly competed for by two very different sets of competitors. The Salvation Army, being apparently under the impression that people who go to menageries and circuses stand in special need of their attentions, had had the audacity to bid against the King of Showmen. They had set up a tent near the steam-boat pier, and were doing their best, by means of their noisy "exercises," to deprive Barnum of his lawful and natural prey. I am disposed to think that the show had the best of it. I did not go out into the distant suburbs to see it; but if its patrons were not more numerous than the inquirers for "blood-and-fire" theology,

Barnum & Co. were some thousands of dollars out of pocket on their Kingston performances.

Kingston is one of the very oldest towns in Canada. It was occupied by the French as early as 1672, but it fell into the hands of the English about the same time as Quebec was captured by Wolfe's forces, after the battle on the Plains of Abraham which cost the lives of the chief commander on each side. As I before remarked, Kingston was one of the candidates for the post of federal capital when the scattered colonies were combined into the Canadian Dominion, and I have already described the circumstances under which Ottawa was selected by the Queen.

Kingston is, however, of more importance than its mere population would indicate. It is the seat of some prominent educational institutions, and possesses several fine churches and other public buildings. The principal provincial Penitentiary is there, and the Rockwood Lunatic Asylum is near. It is apparently a very pleasant place of residence. The suburbs consist of wide streets, in which almost every house is detached. The fine avenues of trees which line the roads on both sides are as grateful to the sight as they are to some of the other senses on a broiling day like that of our visit. These avenues of shade trees are, I may remark, characteristic of almost all Canadian and American cities, and a very beautiful and pleasant feature they are. In many cases, they are planted long before the houses are built. As soon as the site of a town is decided on, the streets are laid out chess-board fashion, and miles of trees are often planted at once. By the time the blocks, or square spaces enclosed by the streets, are fairly covered with buildings—sometimes long before—the trees have attained a considerable size, and are in a condition to render the grateful service for which they were designed. Kingston, moreover, like almost all other towns approaching or exceeding 10,000 inhabitants, has its lines of street cars, which, for a few cents, carry passengers from one end of the city to the other every few minutes.

LAKE ONTARIO.

It was late in the afternoon when our steamer left Kingston and fairly entered Lake Ontario—the lowest and the smallest of the greatest group of fresh-water seas in the world. Ontario is, as I have said, the smallest of the five; but its smallness is only relative. It is nearly 200 miles in length, and at one point is 60 miles in breadth. Its area is 6,000 square miles; that is to say, it is about six times as large as the county of Dorset. Its average depth is 600 feet, and its level is 224 feet above that of the Atlantic Ocean. The greater part of this difference in level is, of course, accounted for by the series of rapids already described. Lake Ontario receives some respectable contributions of water from the numerous streams which drain western New York State and a large part of the Province of Ontario; but by far the greater part of the vast flood which it passes on to the St. Lawrence comes from the four upper and larger lakes, and flows into it from the Niagara River. As evening was drawing on when we left Kingston, it was but little of the lake that we saw. The last features discernible in the twilight were two groups of small islands, called respectively the Ducks and the Drakes, between which we passed into what appeared like the open sea beyond. When we awoke next morning (Sunday), we were steaming into the harbour of Toronto, and we were comfortably quartered in the Queen's Hotel, in that city, in time for an early breakfast.

TORONTO.

Toronto is not—that is, not *yet*—the largest city in Canada, Montreal enjoying that distinction for the present; but it struck me as being the most energetic, progressive, and English-like place I entered before crossing into the States. It is, indeed, a place of which the Canadians may well be proud. As a matter of fact, it is the most English of the chief Canadian cities. Quebec, as we have seen, is mainly French, and Montreal largely so; but the inhabitants of Toronto are almost entirely of British extraction. Unlike Quebec and Montreal, Toronto, as a city, was never French, though its site was no doubt included in what was once regarded as French territory. But it was not founded till long after Canada became British. Its founder was General Simcoe, who, in 1794, set it going under the name of York. That name it continued to bear until 1834, when it was incorporated under the name of Toronto—an Indian word which, being done into English, means "The Place of Meeting." The population in 1817 was hardly 1,200, and even in 1852 it was only 30,000. By 1861, it had increased to 45,000, and it is now about 90,000 and constantly increasing.

The city extends for several miles along the shore of the lake. Its harbour consists of a fine bay, which is protected by a long tongue of land—either island or peninsula—against all winds except those from the west; and as the lake does not extend much further in that direction, a gale from the west is not greatly to be feared. Although the city covers six or eight square miles, most of the important Government and business buildings are concentrated on a central area about one mile square. In this small area are the Provincial Parliament House, the principal hotels, the passenger stations of the railways, the Post-office, the banks, the newspaper offices, and many of the principal trading firms. This is the heart of Toronto, and it is to that place what the City and Westminster combined are to our own overgrown metropolis.

ELEVATORS.

Here, for the first time, I saw grain elevators on a large scale, there being several of them scattered along the lake shore. As these erections are constantly referred to in the American newspapers and market reports, and as they form a striking though ugly feature of all the great cities which are engaged in the grain trade, I may as well, once for all, say what they are like. An elevator, then, is merely a large grain store, and it owes its name to the fact that it is usually provided with ingenious machinery for lifting grain out of railway cars or ships in a marvellously expeditious manner, and for re-shipping it with equal dispatch. Some of these elevators are of vast proportions. In Chicago, where they are found on the very largest scale, there is more than one whose storage capacity is measured by the million bushels, and whose power of taking in and discharging grain rapidly is equally amazing. The elevators are painfully alike in their ugliness. They are immense quadrangular buildings, of great height. Out of the centre of the roof rises a second building, a few feet narrower than the main structure, which raises the total height two, or three, or four storeys more. The main building, which is usually of brick or stone, has few, if any, windows; and its immense acreage of blank wall, frequently painted black, is hideous in the extreme. The upper and smaller building is of wood, and, being usually provided with windows, is a little less unsightly. The architects of elevators do not bother their heads about

appearances. Utility is all they care about, and that, no doubt, they secure. But in this exclusive devotion to the useful, they, unfortunately, manage to disfigure a great many fine views. The shores of great lakes and rivers are naturally the sites most in favour; and the result is that the waterside views of such cities as Toronto, Buffalo, Cleveland, Detroit, Chicago, Milwaukee, St. Louis, &c., are terribly marred by these hideous piles. The term "elevator," by the way, promises to lose its original meaning, just as so many other words have lost theirs. It is now generally applied to *any* grain store, whether it possesses mechanical appliances or not. Every dealer who runs up a little wooden shed for grain at a wayside railway station now dignifies it with the name of "elevator."

THE PLAN OF THE CITY.

Toronto is laid out with tolerable regularity, but it is not quite so monotonous and chess-boardly in the arrangements of its streets as many of the cities which I afterwards saw. Its greatest length is from east to west along the shore of the lake. The first street running parallel with the shore is Front Street. This is a name usually given to the street nearest the water's edge in those American cities which lie alongside a river or lake. Next to Front Street, Toronto, come successively King Street and Queen Street, two fine thoroughfares which run east and west through the whole length of the city, and merge into one at their eastern extremity. I need hardly say that these names are not often found applied to streets in the States, where kings and queens are not regarded with any superfluous reverence. North of Queen Street, the arrangement of the streets leading east and west is less regular, none of the thoroughfares bearing the same name for any considerable distance. The streets which run north and south—that is to say, from the lake shore inland—are more regular and numerous, and are in all cases perfectly straight. The most central and important of these thoroughfares is Yonge Street, which starts from the neighbourhood of the steamboat wharves, crosses Front, King, and Queen Streets at some of the busiest centres in the city, and continues straight north to the city boundary. Beyond that point it assumes the form of a perfectly straight main road, and as such is continued into the country for (I think I was told) thirty miles. Most of the streets bear English names. The changes are rung on Wellington, Albert, Richmond, Adelaide, Wilton, Pembroke, Duchess, Britain, Nelson, Camden, Grosvenor, Breadalbane, Oxford, Soho, St. George, &c., until the stranger can no longer doubt that he is in a thoroughly British city. Here and there, purely American names, such as Niagara Street, are to be seen; and one wide avenue (Spadina) bears a name suggestive of one of the modern representatives of the Latin; but English names vastly predominate. So, indeed, do English (and Scotch) people.

THE WONDERS OF THE TELEPHONE.

Toronto was the cleanest and best-paved Canadian city I saw. Indeed, in all the appliances and conveniences of civilization, it is not surpassed by many cities on the American Continent. In some respects, it is far ahead of many larger and older English towns. The use of the telephone is a case in point. The telephone wires appear to enter almost every decent house, whether business or private. The district of the Toronto Telephone Company includes, moreover, a vast deal besides the city. The convenience, as well as the marvellous character, of

this system of holding a conversation with a distant person will be well illustrated by the following story. My travelling companion had relatives in Toronto, and together we visited them at their house—a private one in a quiet street. My friend happened to express a wish that he could arrange for another relative of his, living in a town about 35 miles from the city, to come in and see him. The lady of the house said: "Oh, I'll call him up;" and, going to her telephone, she was in a minute or two in direct conversation with him. "Mr. S— is here," she said, "and wants to know if you can come into town and see him." In a few seconds, the day and the train were fixed, and at the appointed hour the gentleman duly turned up. When the Bristol people can thus speak to their friends at Bridgewater or Yeovil, when Exeter can talk to Axminster, and Southampton to Bournemouth, our important towns will be up to the level of Toronto in this particular matter. At present, we are all behind, and I am afraid we shall retain that position until the country insists on it that the Post Office, and the monopoly it claims in the use of electrical communication, shall no longer bar the path of progress. It is not the large American towns only which have the benefit of the telephone. I was in several places of from 5,000 to 15,000 inhabitants in which every respectable house and every business establishment had its telephone. At a third-rate hotel at Marquette, an outlandish place on the shore of Lake Superior, 400 miles north of Chicago, I heard the proprietor's wife "call up" one of the other hotels to inquire about a missing umbrella. I found in other places, not much larger, that the ladies were accustomed to do their shopping by telephone. They "called up," in succession, their "butcher, baker, and candlestick-maker," and gave their orders without leaving their sitting-rooms. When are we going to do this in England? If Parliament would only authorise Mr. Fawcett to stand aside, even at some little sacrifice of Government rights, we might do it very soon, and at a very moderate cost.

SCIENCE AND RELIGION MADE TO SHAKE HANDS.

Seeing an announcement in a Toronto paper that the Rev. Professor Somebody (Hicks, I believe, but am not certain), of Cambridge, England, was to preach at St. Stephen's Protestant Church, on the Sunday morning of our arrival, on "Science and Religion," I decided to go and hear him. A "drummer" for (as he told me) "the largest electro-plate works in the world," at Meriden, Connecticut, who happened to be at our hotel, agreed to go with me, to see what light the professor was able to throw on the old, old problem; and we started off together, in a temperature which had sent the thermometer up among the 90's. We found Spadina Avenue, an immensely wide one, to be a good deal longer than it was wide, and by the time we reached the church, we felt, and no doubt looked, as if we had been in a Turkish bath. I never in my life pitied either a preacher or a congregation more than I did those whom we found in St. Stephen's Church that morning. The rev. professor could never have been told what sort of a congregation he might expect, or he would certainly have chosen a different subject for his discourse. Nay, if he could have foreseen both the nature of the congregation and the heat of the day, he would perhaps have dispensed with a sermon altogether. For a good half of his hearers were the children of a Sunday-school, who could not understand a single sentence from be-

ginning to end, and whom the intense heat rendered irritable and restless in the extreme. The majority of the adult half were very commonplace and unintelligent-looking people, who appeared horribly bored at having to listen to an address which was utterly incomprehensible to them. But the sermon had been duly advertised, and, whether understood or not, had to be let off. I listened to it as well as the restless children and the great heat would allow. It was a thoughtful and scholarly address—the work of a thinker who believed he had discovered a real *modus vivendi* between the claims of the Church and the teachings of Science. The preacher took a broad and liberal view of the question, declaring, with no circumlocution, but in plain, bold language, that, without pledging himself to details, he fully accepted the doctrine of evolution, and that he found nothing in that doctrine which conflicted in any way with his view of Christianity. To me this was a memorable discourse. It was the first time in my life that I had ever heard a clergyman of the Established Church publicly declare his acceptance of Darwin's famous theory, and his belief that it touched no vital part of his religion. Verily, the world moves! But I could not help regretting that the Professor had been obliged to cast his pearls before—no, I don't mean that, and had better drop the metaphor. I mean it is a pity he was not favoured with a more appreciative audience and a rather cooler morning.

• THE ART AND MYSTERY OF PORK-PACKING.

One of our fellow-passengers by the *Parliar* was a Canadian gentleman named Davis, who, with his wife and daughter, was returning home after a visit to England. He was about the only Free-trader amongst all the Canadians on board. The question of Free-trade versus Protection was being continually fought out among the various gossiping groups on deck; and Mr. Davis, finding that I and my friend had frequently to hold our own—or, at any rate, to try to hold it—against overwhelming odds as regards numbers, he gallantly came to our rescue, and before we reached Quebec we were on very friendly terms with himself and his lady companions. We discovered that he was the chief proprietor of a large "packing-house" at Toronto, and before we parted from him, he made us promise that we would look him up when we reached that city. "Packing-house" is an expression peculiar to the American language. It is a name applied generally to the numerous and vast establishments in which pork, beef, and other meats are packed in boxes or tins for export.

Messrs. Davis & Son have a retail establishment for the sale of pork at a considerable distance from the packing-house, and it was to this store, or shop, that we first found our way. The proprietor was not there, but the manager instantly telephoned to the packing-house to say that we had called. "Will be up in a few minutes" was the reply which almost immediately came back by the wire. So we waited, improving the time by listening to, and occasionally taking a little part in, a very warm discussion which was going on between the manager and one of his butchers on the Sunday-closing question, which appeared to be at that moment agitating the city. The two men were diametrically opposed to each other, and they debated the subject with great energy and earnestness, but with perfectly good temper. Their discussion was interrupted two or three times by the entrance of customers—Chinamen in each case; and as

these were the first of the thousands of the pig-tailed Mongolians whom we saw in the course of our journey, we took stock of them to the best of our ability. They all came for pork—a kind of food of which the "heathen Chinese" are very fond. It is apparently the only luxury they indulge in. In their own country, the majority of them get only rice, and not too much of that; for China is greatly overpopulated, and the struggle for bare existence is in many districts keen and terrible. But when John Chinaman gets to America, he is in clover—as long as the Irishmen let him alone. He finds himself in a land where the rate of wages is high even when compared with European standards, and fabulously extravagant when contrasted with the wretched earnings of the Chinese at home. He can underbid the Irish and native Americans in the labour market, and still be "rich beyond the dreams of avarice" he indulged in in his native land. He is, moreover, very industrious; and, as a matter of fact, he gives more labour for less money than those with whom he competes. It is, therefore, not surprising that the Irish and native American labourers disapprove of John Chinaman, and do all they can to keep him at home, or, failing that, to drive him back. It is in California that this labour feud has reached its most serious proportions, and I shall have further occasion to refer to it when (if ever) I get so far with this narrative as to deal with that distant State. Few of the Chinese (who, of course, all come across the Pacific and land at San Francisco) penetrate so far as the Eastern States, and still fewer reach Canada. Still, as I have said, we found a few in Toronto. These were all in the laundry line. John is a capital washerwoman (to indulge in an Irishism); and whenever the Chinese come across the Rocky Mountains, it is almost always to set up laundries. Go into what city you will, from Toronto to San Francisco, and you find these Chinese washing establishments; sometimes they are so numerous as to be apparently monopolising the business. "Sam Sing's Laundry," "Hung Hen's Laundry," "Who Joy's Laundry," and similar inscriptions, painted on long sign-boards standing out across the footway, constantly stare you in the face.

But in less time than it has taken me to jot down these few preliminary remarks about the Chinese, Mr. Davis drove up to the door of his store, and in a few minutes it was arranged that he should presently send his carriage to our hotel to take us round the city, and ultimately to set us down at his packing-house. I pass over for the present what his courteous son-in-law showed us in the course of the drive, and come at once to the packing business.

Messrs. Davis's establishment, which, I believe, is the largest of its kind in Canada, is at the east end of the city, close to where the Don—not that big river which drains so large a portion of Southern Russia, but a small stream bearing the same name—flows into Lake Ontario. The business of the Don Packing-house consists—exclusively, I think—in the killing, curing, and packing of pork. On the day of our visit, business was somewhat dull; still, a few score of pigs—possibly a hundred or two—had to be operated on some time after our arrival, and we remained to witness the process. (Correction: I have used the word "pigs." This is apparently unknown in America. There pigs are always "hogs.") This is how poor Piggy is made meat of in about eight or ten minutes:—

He—a whole crowd of him—is driven up an inclined path to the level of the third floor of the building. He

hears frightful squeals, gradually subsiding to spasmodic and feeble sobs, proceeding from those of his brethren who have preceded him up that fatal road. He may be a very stupid animal, but he has wit enough to suspect that it is not for his own comfort and profit that he is being driven to the top of a high house, amid sights, smells, and sounds which are all sufficiently ominous. He protests loudly, of course; but he has to go, and when he reaches the top, he is not long kept in suspense as to his fate. I cannot describe the exact mode of execution. Wholesale butchery, however necessary, has no charms for me, and I therefore avoided the slaughter-house altogether. All I can say is that the hogs which walked up one inclined plane slid down another and shorter inclined plane, with their throats cut and dead, within five minutes. It was at the bottom of this second inclined plane that the peculiar treatment of the carcass began.

Close to the bottom of this slide was an opening, as large as a door, in the side of what looked like a small blast furnace, or a very large chimney on fire. No fire was actually visible through the door at the bottom, but the intense glow which proceeded from it showed that a fierce fire was burning inside and immediately above. Flames and smoke were, moreover, issuing from the top of the erection, just as they issue from the hundreds of furnaces which one sees at night when passing through the Black Country in South Staffordshire. We approached as near to the bottom of this diabolical-looking apparatus as the heat proceeding from it, and the heap of dead pigs lying at the bottom of the slide, would allow. We then discovered that the furnace was a sort of circular roasting machine. The centre was clear from top to bottom, and sufficiently large to allow the largest of pigs to ascend or descend through it, head or tail first. But this open shaft was completely surrounded by a fierce fire, stimulated by a blast from a fan, so that everything which passed up or down the shaft went through the fire without touching the burning coals. An endless chain, with specially large links or rings at intervals, was constantly travelling up through the centre of the furnace and down on the outside. A man, who was invisible to the looker-on, was posted in such a position that he could regulate at will the force of the fire and the speed with which the chain travelled. It depended mainly on the judgment of this invisible operator whether the process of singeing (or, as we used to call it in Hampshire in my boyhood, "swealing") was performed properly or improperly.

The fire having been duly lighted and forced to the proper pitch of intensity, the invisible operator took his place—a rather warm one—in his own watch-box, and another man took up his position—an equally sultry one—close to the furnace door. Then the slaughter began, and in a few minutes the man at the furnace door stood like the sole survivor of a battle. A heap of dead pigs, tumbled pell-mell down the wooden slide, lay around him, and threatened to overwhelm him unless he took prompt measures to forward them the next stage on their porkward progress. Seizing the pig that lay nearest and handiest by one end—whether by the snout or by the heels I forget now—he deftly fastened into it a hook attached to a short chain. The other end of this chain was furnished with another hook, and this was cleverly hitched into one of the large rings or links of the endless chain which was slowly moving upward through the furnace. The result, of course, was that the pig, in an

upright position, was slowly drawn up through the very midst of the "burning fiery furnace." Every hair on his body was instantly frizzled up by the intense heat, but he was not in the fire long enough to allow his flesh to be in the slightest degree injured. The moment one pig had disappeared on his upward journey through this porcine Inferno, the operator at the bottom hitched on another; and so the endless procession was kept up as long as the slaughterers up aloft continued to slay, and to tumble their victims down the wooden slide. I did not time the operators, but, as near as I can judge, two pigs were passed through the furnace every minute. The rate could not, indeed, have been much below this, for Mr. Davis, jun., told me that in busy seasons they sometimes killed and disposed of 1,200 pigs per day.

As the carcasses of the pigs, having thus had the cleanest and quickest of shaves, emerged from the furnaces, they were promptly seized and started on another stage; and in less time than it takes to describe the process, they emerged from the hands of a host of operators, their internals removed, their inner and outer surfaces well washed by means of a perfect flood of water poured upon them from flexible tubes, and their plump forms ready for the cooling room. At no one point had they to be lifted. From the level of the top of the furnace, they started on a downward journey, and travelled on from hand to hand by virtue of their own gravity alone. They were suspended by the heels from a strong, deep, continuous bar, placed edge upwards, which ran on a gentle decline from near the top of the furnace to the centre of the immense loft in which the carcasses were hung prior to being taken into the cooling room. On the top of this bar ran small iron pulleys, like wheels on a rail, and from each of the pulleys hung a pig's carcass on a small cross-bar. As the carcass left the hands of the operator who gave it its finishing touch, it received a gentle push, which sent it on to its destination without further aid. It was curious to see dead pigs, with their snouts to the floor and their heels in the air, gliding about silently in this mysterious fashion, for the eye did not at once detect the slight drop in the level of the bar on which they travelled. It was, moreover, necessary to be on the look-out for the pigs; for at one point the overhead rail made a sharp turn through a door-way; and as the carcasses sailed in round this corner, it needed no great skill to make sure of being bowled over by one of the advancing members of the never-ending procession. As the carcasses reached the end of the rail, they were transferred, by an ingenious arrangement, but still without being lifted, to a series of parallel bars running off at right angles from the main bar, like the branches of a railway. They were thus brought close together in ranks, as close as troops stand on parade, and presently by a similar process they were removed into the cooling room. This is an immense square apartment, with double windows and walls specially adapted to exclude heat. All the air that goes into it passes first through ice, of which hundreds—I believe I may say thousands—of tons are used during the summer season. On the intensely hot day on which we visited the place, going into this room was something like an instantaneous transfer from Africa to Greenland, and it was neither pleasant nor safe for us, who were unacclimatized, to remain in so low a temperature more than a minute or two.

Mr. Davis and his son were good enough to show us all the processes carried on in the factory, and to explain how every particle of the defunct hog is turned to some good purpose. It was all very interesting, but

truth compels me to say that some of the processes, such as the boiling down of the lard, and the conversion of the blood, &c., into manure, are by no means pleasant. Indeed, I should not advise fastidious persons, or those possessing a very easily-offended sense of smell, to go over a packing-house. I do not know that such an experience need interfere with one's appetite for pork; but it must be admitted that some of the sights and sounds are not such as either the humanitarian or the super-refined would be likely to relish. I inspected the place because I knew pork-packing to be one of the greatest industries of America, and because I thought it my duty to learn what I could about it, even at some little self-sacrifice. I have described the processes more fully than I otherwise should have done, because I shall have no occasion to return to the subject. I afterwards saw the outskirts of Armour's and Libby's vast establishments at Chicago, and of similar concerns at St. Louis, Kansas City, and Cincinnati; but although some of these are much larger than the Don Packing-house, disposing, in one instance, of no less than 5,000 hogs a day, I did not put my head inside one of them. I had thought it my duty to see one, but that was enough. At any rate, I was quite content to regard it as a fair sample of all the rest. I was told, moreover, by a gentleman resident at Chicago, that the inspection of some of the larger packing-houses is not unattended with risk, unless one happens to know the workmen's expectations as to "tips;" for "tips," as I have before explained, are becoming a recognised American institution. A friend of the gentleman to whom I have referred was shown over Armour's place. He happened, unfortunately, to be a great swell in the matter of dress, and to be ignorant of or to ignore the workmen's rules. Passing along below the level at which some men were engaged in opening and disembowelling the pigs, he naturally looked up to watch the operation, and at that critical moment a bunch of the internal organs of one of the animals "accidentally" slipped out of a workman's hands and dropped with the most wonderful accuracy full on the dandy's vast expanse of spotless shirt-front.

Let us draw a veil over the excruciatingly painful scene!

MORE ABOUT TORONTO.

One of the most attractive features of Toronto is its noble park of fifty acres, known as Queen's Park. This is close to the northern boundary of the city, and about half-way between its eastern and western extremities. The principal park entrance is approached from the south by a magnificent avenue, called College Avenue. The central roadway of this fine thoroughfare is 120 feet wide, and the shade trees which line both sides are exceptionally large and handsome. The avenue is about three-quarters of a mile in length and perfectly straight, and it forms a direct communication between the park and the centre of the city. The park is beautifully laid out, and contains a fine monument, in the shape of a brown-stone shaft, surmounted by a colossal marble statue of Britannia. The inscription on the pedestal explains that this monument was erected in memory of the Canadian Volunteers who lost their lives in repelling the absurd Fenian invasion in 1866. Close to the Queen's Park, and apparently forming part of it, are the extensive grounds of the University of Toronto, a large building of grey rubble stone, trimmed with Ohio and Caen stone. This handsome pile forms three sides of an immense quadrangle, facing south, and is regarded in Canada as a peculiarly fine specimen of pure Norman architecture.

What Mr. Freeman thinks of its claims to such a distinction I cannot say, and my own opinion on such a subject is worth nothing.

Mr. Davis's son-in-law, a gentleman who had taken up his residence in Ohio, had been a student at the University, and knew all the ins and outs of the place. Under his guidance, we inspected the building, being accompanied also by the janitor, who proved to be an old British cavalry pensioner, and one of the few survivors of the gallant 600 who took part in the mad charge at Balaklava. We were much struck with the solidity and excellence of the building, the completeness of all the arrangements, and the liberal and comfortable accommodation provided in every department. A grant of nearly a quarter of a million acres of land was made to the University in the time of William the Fourth; and if this land is still held by its representatives, it must possess a large and rapidly-increasing revenue. Knox College, a large Presbyterian institution, is within a few hundred yards of the University.

Among other public buildings worthy of notice are Osgoode Hall, in Queen Street, an imposing building in the Grecian-Ionic style, containing the provincial law courts and an excellent law library; the Post Office, at the head of Toronto Street; the Protestant Cathedral of St. James, a spacious Gothic building surrounded by numerous handsome trees, in King Street; the Catholic Cathedral, in Church Street; and the Methodist Church in McGill Square, said to be the finest church of that denomination in Canada. The Provincial Parliament House is in Front Street, and the Provincial Lunatic Asylum near the western extremity of Queen Street.

Having shown us the Park, the University, and other matters of interest, our courteous guide drove us to the north-eastern suburbs of the city, which we found to be romantically beautiful. A small stream (possibly the Don or one of its branches) wound along through a deep and beautifully-wooded valley. So abrupt, indeed, were the sides of this valley that the roads had to be carried across them on wooden bridges of great height. At each end of these bridges was exhibited a notice to the effect that all persons driving over at a faster pace than a walk would be liable to a fine of so many dollars. This notice is to be seen on almost every bridge in America. In the case of rather slight wooden erections like that at Toronto, the regulation is reasonable enough; but I was a good deal surprised to find it in force where the bridges were of iron, and of the most massive and substantial character. High above the valley of the stream which meandered along below were the private residences of some of the merchant princes of the city. Among others, our friend Mr. Davis, of the Don Packing-house, had pitched his tent in this romantic suburb, and a very substantial tent it was, being no other than a large and handsome mansion, elegantly decorated (to use the favourite American phrase), surrounded with beautiful grounds, and furnished with excellent taste. Here we were kindly greeted and hospitably entertained by the lady members of Mr. Davis's family—our temporary friends and political allies from the *Parisian*. Taking leave of these, we were driven to the packing-house, which establishment I have already described.

Toronto looks straight out across the lake in the direction of the mouth of the Niagara River. The distance is about 45 miles, and steam-boats run to and fro daily, a day at the Falls being naturally a favourite excursion with the citizens. We crossed the lake in the afternoon of Tuesday, July 24th. Almost as soon as

we had lost sight of the spires and masts of Toronto, the opposite shore came in view, and henceforth our attention was entirely occupied in the attempt to make out, by the aid of our glasses, the outlet of the short river whose fame has reached the ends of the earth. When, at last, we reached the old village of Niagara, which lies on the Canadian side of the river close to the point at which it joins the lake, we discovered that, for all one could tell from its appearance at that point, the stream might have had as uneventful a journey as that of the Trent or the Thames. From the steam-boat pier we were conveyed by the Canada Southern Railway to a station on the Canadian side of the Falls, and in a few minutes more we were duly quartered in the Clifton House Hotel.

NIAGARA.

Before I attempt, in my feeble way, to describe the impressions and emotions produced upon and in me by a sight of the amazing assemblage of natural phenomena known collectively as "Niagara," I will try to convey some idea of the geography of the locality.

THE UPPER RAPIDS.

The Niagara is a short river, only 36 miles in length, flowing out of Lake Erie and emptying itself into Lake Ontario. The two features upon which its fame depends are the enormous bulk of its stream, and the fact that in its short journey its bed falls no less than 334 feet. As I have already explained, the whole of the overflow of the great lakes (Superior, Michigan, Huron, and Erie) passes off by this river. Those lakes alone cover a larger area than Great Britain and Ireland combined, and the surface they drain is at least twice as large as France. Imagine, then, the whole drainage of France, Germany, and the British Isles gathered into a single stream, and you have some faint idea of the prodigious volume of water which enters the Niagara River from Lake Erie, close to the city of Buffalo. The stream is at first about two miles wide and 20 to 40 feet in depth. At Black Rock, a short distance below Buffalo, where it is crossed by a railway bridge, it is narrowed to about a mile, and the speed of the current is increased to six or eight miles an hour. But the fall is still inconsiderable and the surface placid. Five or six miles from Lake Erie, the river is divided into two streams by Grand Island, which is at one point nearly eight miles wide. When the two streams re-unite below Grand Island, the river spreads out into a lake-like expanse two or three miles in width. But the width soon afterwards begins to diminish, and before very long the water, which has hitherto flowed smoothly, if sometimes swiftly, begins to find itself in serious trouble. For not only is the width gradually contracted, but the gradient rapidly becomes more steep, the channel more shallow, and the bed more rugged. And now the water begins to show its trouble. That which, a mile further back, was a placid and noiseless stream, is now a boiling and raging torrent, dashing itself in fury against the huge boulders and numerous rocky islets which obstruct its course. It is now in the throes of the Upper Rapids, and in the distance of a mile it falls 52 feet. At the end of that mile are the Falls themselves, where the whole mass of water tumbles over a perpendicular precipice 160 feet in height. As one stands on the bank and watches the furious conflict of forces which is going on in the Upper Rapids, giving full play meanwhile to the excited imagination, it is not difficult to

seen that mighty torrent a sentient creature which, suddenly awakened from its placid sleep, discovers that it is on the brink of a precipice of unknown depth, and instantly puts out all its gigantic strength in one final struggle to avert its impending fate. With desperate energy, it stretches its white arms around the rocks and islets which impede its progress towards destruction, and seems to say, as it holds them in its embrace, "If I go, you go also." But the struggle is all in vain. The islets have their foundations deeply set in the living rock, or they would have gone long ago, and one after another they shake themselves free from the water's cold and rude embrace. It is not until the stream is within a few yards of the very edge of the Fall that this appearance of a life-and-death struggle ceases, and then its cessation is most remarkable. It looks as if the watery monster had at last discovered the utter futility of its struggles—had, to put the thing vulgarly, "given it up as a bad job," and resolved to meet its inevitable fate with calmness and dignity.

THE FALLS.

It is, indeed, impossible to convey a just conception of the combined swiftness, smoothness, external calmness, and inimitable grace with which that torrent of a million tons a minute sweeps over the edge of the precipice and takes the fatal plunge. The curve formed by the water, as it leaps clear away from the rock into mid-air, is unspeakably graceful, especially on the American side, close to the favourite point of view. And, watch intently as long as you will, that graceful shape never appears to vary by so much as a hair's-breadth. The supply of water is practically limitless and unvarying; and if the Rapids and the Fall were instantaneously frozen in obedience to a mandate of Omnipotence, the shape which the water assumes at the edge of the Fall could hardly appear more fixed than it does while the everlasting torrent pours on and over.

The width of the river at the Falls is about four-fifths of a mile, but this is divided into two unequal spans by Goat Island, which occupies nearly 1,000 feet of the total width. As Goat Island extends down to the very edge of the precipice, there are two distinct falls. That between Goat Island and the American shore is known as the American Fall, and that between the Island and the Canadian bank is the Horseshoe Fall. The American Fall is about 1,100 feet wide. The Horseshoe Fall, measured along the edge of the precipice, is much more than 2,000 feet. I need hardly say that this fall took its name from its shape. Instead of presenting a fairly straight precipice for the river to tumble over, as the American Fall does, the Canadian cataract forms an irregular semicircle, with a gash many yards deep in its centre, rendering it still more irregular in shape. The water, coming down this immense horseshoe-shaped line of cliffs, tumbles into a huge cauldron, nearly half-a-mile in diameter, which presents more than one of the appearances of being boiling, as if for a grand washing day for the whole American Continent. For not only are the waters lashed into a white foam which might very well pass, at a distance, for soap suds, but a mighty cloud of steam-like spray is always hanging over that gigantic cauldron and effectually veiling from view two-thirds of the height of the fall. Probably no mortal eye has ever seen the centre of that basin, where the troubled waters from above leap into the tormented waters below; for "the smoke of their torment goeth up for ever." I know no more graphic or appropriate form of words in which to describe the

dense and ever-present cloud which hangs over the seething and mysterious depths.

The spray which rises from the bottom of the American Fall is much less dense and obstructive of the view, there being no such circular basin as on the other side to prevent its being dissipated by the wind. Beautiful rainbows are to be seen amid the mist on both sides when the sun is shining and the spectator is in the proper relative position.

The Falls are at a point where the river makes a rather sharp turn. From Lake Erie down to the Falls, moreover, the banks of the river are low and gently sloping towards the stream. But as soon as the Falls are passed, the character of the river undergoes a complete change. The banks retain the same actual level as those further up; at some points, indeed, they are still higher. It, therefore, comes about that, before the water has fairly recovered from the fit of madness into which its mighty leap has plunged it, it finds itself compressed into a gorge 200 or 300 feet in depth, like the Avon at Clifton. But this gorge is narrow as well as deep, and the gradient once more becomes very steep. The result of all this is that for six or seven miles the stream rages and roars along the bottom of a deep chasm which is nowhere more than 400 yards wide and in many places only 200 yards. About halfway down, this chasm suddenly widens out into a sort of huge basin, and then the gorge takes a sudden turn to the right. At this point, the stream is compressed into the narrowest possible limits. It is said that the width is only 220 feet. This would appear to me incredible had I not the figures on excellent authority. Three or four miles below the point at which the course is thus suddenly turned, the gorge comes to an end. The river at once widens out, and thence flows calmly on, between comparatively low banks, until it is lost in the vast expanse of Ontario. The fall of the river between the foot of the Falls and the lower end of the gorge is 104 feet.

THE LOWER RAPIDS AND THE WHIRLPOOL.

The rocky basin last referred to contains the famous Whirlpool, and the rapids immediately above them are the Lower or Whirlpool Rapids. No part of the stupendous spectacle presented by the Niagara River is more wonderful or impressive than these Lower Rapids and the Whirlpool in which they terminate. To see them to advantage, it is necessary to descend the perpendicular side of the gorge, which can be done, comfortably if expensively, by means of a lift. The cliffs are so high that a good view could not be obtained from the top, even if private speculators had not done their best to shut out all access to the verge of the chasm except at those points at which they can levy a heavy toll. We paid our half-dollar and were duly "lifted" by steam power down to the very edge of the torrent. The scene beggars all description. Imagine a thousand madmen struggling to escape from a burning building through a passage in which only two can walk abreast. Imagine a huge flock of sheep chased by wolves, with no way of escape except through a single narrow gateway. Imagine anything and everything you please which includes a frantic struggle on the part of a vast moving mass to get through a passage of utterly inadequate width, and you will only have begun to form a faint conception of the awful conflict of forces which is for ever going on down in the depths of that gloomy chasm. To say that the surface is stirred furiously like the ocean in a gale is to tell but

a small part of the truth. That it is so stirred goes without saying. But the most remarkable and impressive feature of the scene is the wonderful heaving of the waters up and down bodily every few seconds. To revert to my former simile, the river looks again like a sentient and suffering creature—a gigantic serpent, let us say,—which slowly heaves up its huge, long back in its mortal agony, and as slowly lowers it again. I have never seen or heard of such a movement as this in connection with any other mass of water, and I must say it fairly astounded and fascinated me. The water literally stood up in a heap for two or three seconds at short but irregular intervals, for this remarkable rise of the water was confined to the centre of the stream and did not extend to the sides. Indeed, if it had extended to the sides, it would have made very short work of us, standing as we did close to its raging edge, in the company of a guide who knew the torrent's little ways most thoroughly. Where everything is on so vast a scale, it is difficult to form a trustworthy estimate as to distances or heights, and I am almost afraid to venture on a guess as to how high the centre of the river rose in these remarkable upheavings. I should say, however, that it was sometimes heaped up to a height of twenty feet, for the water looked occasionally like a long Atlantic roller lying lengthwise in the gorge. Immediately opposite where we stood, and therefore at the foot of the cliff on the Canadian side, there was a building of moderate height—at least two storeys, if not three. It was probably between 200 and 300 yards from our point of view. When the swell of the river was at its lowest, I could see the whole of this house, as well as the rock-strewn bank at its base. But when the writhing monster which filled the chasm raised its mighty back to its full height, the whole house was completely hidden from view for a second or two at a time. This fact gives a better idea of the remarkable heavings of the river than any estimates of my own in feet or inches. If any reader marvels at this wonderful display of energy, let him remember that in this rocky gorge is concentrated all the water which has been drained from a country as large as France, Germany, and the British Islands combined, and, further, that this prodigious mass is running down a slope of 20 or 30 feet to the mile, pressed on from behind by the resistless force of a fresh million tons of water every minute. Is it any wonder that the torrent tears along at railroad speed, raging, and seething, and dashing itself into spray against every tiny projecting rock? Is it any wonder that the furious, foam-crested waves curl back upon and destroy each other in their frantic rage? Is it any wonder that the torrent heaves as if in mortal pain, and in eloquent protest against the unchangeable law of gravitation which drags it down relentlessly and at headlong speed to its fate? Given the monstrous body of water, the rapid fall, and the narrow, rocky gorge, and this appalling display of energy is a matter of course.

But now let us pass on from the Whirlpool Rapids to the Whirlpool itself. Try to imagine such a torrent as I have been attempting to describe rushing headlong into a circular rock basin, from which the only escape is by a sharp turn to the right, through a gorge even narrower, and with a descent even steeper, than those of the rapids above the basin. This is exactly what happens to the stream, and I need hardly say that that basin is a raging whirlpool, in which the water circles round and round repeatedly before it escapes into the lower gorge. It is in this famous Whirlpool, indeed,

that the fury of the torrent reaches its climax. In the matter of disturbed and raging elements, the imagination can conceive nothing more awe-inspiring and sublime. It is said that floating objects which once get into the Whirlpool sometimes circle round and round for days, or even weeks, before escaping by the narrow exit. Blood-curdling stories are told of human bodies—the mortal remains of those who have been dragged into the Upper Rapids and over the Falls—being thus carried round and round the Whirlpool in a ghastly and apparently endless dance, sometimes assuming an upright attitude and sometimes the position of a swimmer, as if mockingly simulating the activities of actual life. There is a legend current to the effect that an Indian woman, whose lover had been drowned here, and who was determined not to survive him, launched her canoe into the river and was carried down into the Whirlpool. There, for several days, she was watched as she floated round and round the magic circle, until the relenting torrent at last drew her canoe into the lower gorge and sent her to rejoin her lover.

CAPTAIN WEBB'S SUICIDE.

Will it be believed, by any sane person who has followed me thus far, that these Lower Rapids and the Whirlpool in which they terminate were the very parts of the river which Captain Webb was mad enough to think he could swim through? Such was the fact, and it happened that I and my companion were at Niagara on the very day on which he went down to his death. We were not aware that the impossible feat was to be attempted on that day, and, in fact, knew nothing about it until we reached the Clifton House. We then learnt that Captain Webb had left his watch and other valuables at that very hotel an hour or two before, and had dived from a boat about a quarter of a mile above the Lower Rapids. The hotel people were already beginning to think that it was time he had been heard of from below; and, as the evening wore away without news of him, expectation began to give way to anxiety, and anxiety to despair. But it was not until the Buffalo newspapers arrived next morning that we obtained trustworthy evidence as to his fate. We then found that he had safely passed through the Rapids and reached the Whirlpool before he was finally lost sight of. Only 13 minutes elapsed between his plunge into the water and his final disappearance. His wounded and battered body was found four days afterwards near Lewiston, just below the end of the gorge, and about four miles from the Whirlpool. In all probability, he had been circling round the Whirlpool during the greater part of those four days.

It was on the day following that of Webb's suicide that we descended to the edge of the rapids, and it was not until then that we fully realised the man's presumptuous madness. A photographer who was stationed down there to "take" people with the torrent for a background, and who said he had for years spent the greater part of every day there, pointed out to me the spot at which he finally lost sight of Webb. At that spot, he said, everything that floated down invariably disappeared. Great logs would dive down, end first, as if sucked under by some irresistible force, and were never seen again—that is, in that part of the river which was within sight. Webb was certainly seen above water again lower down—in the Whirlpool, and logs and other floating material undoubtedly turn up again and go through the usual monotonous mill-horse round for a shorter or longer period. "If he'd asked me what I

know," continued this photographer, "I guess he'd never have attempted that swim. But I am told he had never seen the rapids closer than from the top of the cliff." This I was told by others was actually true, and I can well believe it. That any man, not a raving lunatic, who had seen the Lower Rapids and the Whirlpool at close quarters, should be possessed with the amazing delusion that his breath and muscle were capable of a struggle with such a chaos of contending forces, is to me incredible. As it was, the verdict in Webb's case ought to have been "Suicide while temporarily insane."

GOAT ISLAND.

As I have already explained, the Fall is divided into two unequal parts by Goat Island, which, being in the very midst of the rapids, and close to the precipices of both Falls, affords a number of commanding points of view. The island is not more than a few feet above the level of the water at its highest point. It is beautifully wooded, and its woods and ferns and grass are maintained in a condition of perpetual verdure by the encircling waters and the ascending spray. At the lower end, close to the Falls, the island is about 1,000 feet in width. Its length up stream is somewhat more—perhaps twice as great. Goat Island is reached from the American shore by a bridge 600 or 700 feet in length, resting at several points on rocks rising out of the bed of the stream. The toll charged at this bridge is half a dollar (2s). The visitor is struck with amazement to see a bridge thus spanning the Upper Rapids at the most dangerous point, within 150 yards of the very verge of the Fall. The work of construction was certainly a daring one; but the bridge is clearly very substantial and perfectly safe, and the most timid would hardly hesitate to cross it.

The centre of the bridge rests upon a rock called Bath Island, and on this tiny islet, almost overlooking the awful gulf into which the river plunges, is a paper-mill in full work. I need hardly say that that mill causes no trouble with its smoke. It possesses neither boiler, nor engine, nor chimney. The water of the rapids encircling the rock works all the machinery without turning a hair.

We visited Goat Island, of course. Turning to the right as soon as we were off the bridge, and following a delightful path shaded by the overhanging trees, we found our way first to Luna Island. And the mention of this rock reminds me that I must make a slight correction in my statement as to the division of the great cataract into two distinct falls. As a matter of fact, there are three falls—the Horseshoe, the Middle, and the American. The Middle Fall is, however, only a few yards wide, and is separated from the American Fall by so small a space—the mere width of Luna Island, just referred to—that for all practical purposes the two falls are regarded as one. It is only at close quarters that the distinction between them is noticed. We were unaware of it until we came suddenly to a bridge, which we found crossed the Middle Fall stream a short distance above the precipice. Crossing this stream, we found ourselves on Luna Island, and were able to walk to the very edge of the precipice, where we could fairly dip a walking stick into the water of the American Fall proper at the point where it actually sweeps over into the abyss. Standing in this position involves no danger, for the enterprising owners of the islands have fixed a strong iron railing into the solid rock, for the protection of those who are anxious to look over the edge. That the position is, nevertheless, a trying one to the owners of weak nerves,

I can well believe. The spectator stands, indeed, in the very midst of the raging waters. Behind him, and only a few yards off, is the Middle Fall. Away up the stream to his right, as far as the eye can reach, the rapids rush and foam and roar, as if a very hell of watery devils had just been let loose, and had sworn to sweep the tiny islet which clings to the edge of the precipice into the boiling depths below. To the spectator's left, and so near to him that he could almost drop a stone perpendicularly to the bottom, is the precipice itself. He sees the torrent sweep smoothly and majestically over the edge, but the point where it tumbles into the great basin below is hidden from view by the ever-ascending cloud of spray.

From Luna Island and the American Fall, we made our way to the point where Goat Island overlooks the mighty Horseshoe, and there the wonders we had already seen were, if possible, surpassed. At least two-thirds of the whole mass of water passes over the Horseshoe, the edge of which is more than two-fifths of a mile in length. In the centre of the fall, where the current is swiftest and the torrent deepest, the edge of the precipice has, of late years, altered a good deal in shape. The beautiful curve which one sees in old pictures of this fall is now spoilt by a huge gash, forming, as it were, a little horseshoe at the toe of a large one. Into this inner gash the torrent pours from both sides with a strength and fury which are perfectly awe-inspiring, even when viewed from a distance of nearly a thousand feet. Here is a fact which will help the reader to realise the depth and volume of the river at this point. In 1829, a condemned lake ship, the *Detroit*, which was of no use except as firewood—an article of which the lake district had then more than enough—was sent over the Horseshoe Fall, "just for the fun of the thing." The ship drew 18 feet, but she swept over the precipice like a bird, without showing the smallest sign of having touched the rock, even at the extreme edge. I have heard that not a vestige of the *Detroit* was ever seen afterwards.

The part of the Horseshoe Fall next to Goat Island is a good deal encumbered with rocks down to the very verge. One of these was sufficiently large to sustain a high tower, of the lighthouse sort, for many years. This erection, which commanded a splendid bird's-eye view of the whole of the Canadian Fall, and was known as the Terrapin Tower, was finally blown up, as being unsafe, in 1873. The rock on which it stood can still be reached by a series of bridges leading from rock to rock, and the view, even from the level, is surpassingly grand. The visitor can stand as near to the edge of the Horseshoe here as he approached to the American Fall at Luna Island. In those parts of the fall which are obstructed by rocks, a number of floating logs have become entangled on the very verge of the precipice. There they lie like artificial booms, heaving up and down upon the surging waters; and it struck me that they might possibly serve as the "last straw," of which the proverb speaks, to any unfortunate wretch who might happen to have been caught in the rapids and carried down to apparently inevitable destruction. Whether they have ever thus saved a life, I do not know.

THE THREE SISTERS.

Off the upper end of Goat Island—that is, at the end furthest from the Falls—lie, one beyond another, three small, rugged, but beautifully-wooded islets, called the Three Sisters. Although these tiny islands are in the very midst of the rapids, means have been found to carry bridges from one to another, until all three are

rendered accessible. The half-dollar paid at the long bridge first described gives the visitor the right to cross all the other bridges. We visited the Three Sisters in turn, and the views they afforded us will never fade from my memory. The most wonderful sight of all was obtained from the furthest of the islands, for that lies exposed to the full fury of the stream. We sat down on the rocks on the extreme verge of that islet, under the shelter of the drooping trees which kissed the raging torrent as it passed, and the fascination of the scene fairly chained us to the spot. Looking up the river—really and visibly up, for the descent at this point is very steep,—it was not difficult to imagine that an endless body of jet-black horses with snowy manes, riderless but in almost perfect rank, were sweeping down hill towards us, and would in a moment pass over us and the tiny island on which we lay. On came the chargers in serried, never-ending array, rank above rank, squadron beyond squadron, the rattle of their thousand hoofs combining to form a deep and all-pervading roar; but they dashed themselves in vain against those iron rocks. The islet sensibly quivered beneath the shock of the foam-crested masses that were hurled against it every instant, and a very nervous and imaginative person might have been excused for thinking the rock was in some danger of being torn up by its roots and hurled over the Falls. The only danger I fancied I saw arose from a tangled mass of floating timber which had got lodged in some rocks just above the entrance to the channel between two of the islands. The current which rushed down that particular channel was furious in the extreme, and it struck me as extremely likely that, if the timber should happen to be floated off suddenly and altogether, it might sweep away the little bridge which connected the islands. I confess that I should have been sorry to be either on the bridge or on the outer island at the moment of the loosening of this "boom"; for I thought in the one case I might possibly be swept away with the bridge, and in the other I might be turned into a sort of Robinson Crusoe until the bridge could be restored.

THE CAVE OF THE WINDS.

I have already explained that the water, in passing over the Falls, leaps clear away from the edge of the cliff and falls at a considerable distance from its base. There is consequently a clear space between the rock and the curtain of water which is ever falling in front of it. This passage, which is naturally rock-strewn and rugged, is wide enough to allow visitors to pass under with more or less safety; and at two different points there are lifts by which those who want a dollar's worth of real sensation may descend and get it by going a few paces behind the water. One of these points is on the Canadian side, at the end of the Horseshoe Fall. The other is on Goat Island, the passage in this case being behind the little Middle Fall. The enterprising gentleman who presides over the Goat Island lift duly pounced upon us as we passed his hut, and described to us the rapture of standing in an oilcloth suit amid a watery hurricane. Seeing that we hesitated, and having discovered in a moment that we were Englishmen, he threw Professor Tyndall at us bodily. That learned student of Nature had, he said, been there recently, and was so delighted with his experience under the Fall, that he declared it the cheapest thing in that line he had ever bought, and made him (the touter) solemnly

declare that he would never allow an Englishman to pass without getting him down—if he could. In our case, he couldn't, and I have ever since regretted his failure. But the truth is, neither my companion nor I was in very robust health, and we doubted at the time if it was wise to venture on an enterprise which appeared certain to involve a smart nervous shock, if nothing else. I have since pretty well satisfied myself that we made a mistake, and that we missed an experience which was well worth the effort and the infinitesimal risk involved. As, however, I cannot describe the Cave of the Winds from my own observation, I quote a description from *Picturesque America*:—
"The wooden stairways are narrow and steep, but perfectly safe; and a couple of minutes brings us to the bottom. Here we are in spray-land indeed; for we have hardly begun to traverse the pathway of broken bits of shale when, with a mischievous sweep, the wind sends a baby cataract in our direction, and fairly inundates us. The mysterious gloom, with the thundering noises of the falling waters, impresses every one; but, as the pathway is broad, and the walking easy, newcomers are apt to think that there is nothing in it. The tall, stalwart negro, who acts as guide, listens with amusement to such comments, and confidently awaits a change in the tone of the scoffers. More and more arched do the rocks become as we proceed. The top part is of hard limestone, and the lower of shale, which has been so battered away by the fury of the waters that there is an arched passage behind the entire Horseshoe Fall, which could easily be traversed if the currents of air would let us pass. But, as we proceed, we begin to notice that it blows a trifle, and from every one of the 32 points of the compass. At first, however, we get them separately. A gust at a time inundates us with spray; but the farther we march the more unruly is the Prince of Air. First, like single spies, come his winds; but soon they advance like skirmishers; and, at last, where a thin column of water falls across the path, they oppose a solid phalanx to our efforts. It is a point of honour to see who can go farthest through these corridors of *Æolus*. It is on record that a man, with a Herculean effort, once burst through the column of water, but was immediately thrown to the ground, and only rejoined his comrades by crawling face downward, and digging his hand into the loose shale of the pathway. Professor Tyndall has gone as far as mortal man, and he describes the buffeting of the air as indescribable, the effect being like actual blows with the fist."

OTHER POINTS OF VIEW.

He was a lucky man who, when Niagara began to attract the world's attention, happened to be the owner of the land which abuts on the American Fall. He carefully fenced in his property and began to charge 20 cents admission. As the best of all the near views is obtained from Prospect Park, as he called his enclosure, he, of course, gets 20 cents from every visitor. It must, however, in fairness be said that he offers some return for his money. At the very point where the edge of the precipice joins the bank, he has erected a massive semi-circular parapet in a line with the perpendicular cliff, where a group of the most nervous and timid people may stand, so close to the Fall as to be almost able to dip their hands into the water as it glides over into the abyss. Those who would hesitate about coming to close quarters with the Falls by means of the bridges and railings on Goat Island, need have no apprehension about doing so at the Prospect Park look-out. Nothing less than the

sudden carrying-away of the rocky angle of the bank itself could place them in jeopardy.

From Prospect Park, moreover, there is a steep railway lift connecting with the bottom of the cliff. Those who do not mind a shower bath, or who are provided with waterproofs, may descend this railway, get a fine view of the Falls from below, be rowed in an open boat in front of the Falls to the Canadian side, and return by the way they went, all for the small sum of a quarter of a dollar.

There are three bridges across the gorge below the Falls, and within two miles of them. The first, which is barely a quarter of a mile from the nearest part of the American Fall, is a suspension bridge for foot and horse traffic. It was, when built, the longest chain bridge in the world. The span from tower to tower is 1,260 feet, and the height above the river 190 feet. The Clifton Bridge is considerably higher, but little more than half the length. As this bridge directly faces the Falls at a moderate distance from them, the view obtained in passing over it is wonderful and impressive in the extreme. The fare for foot passengers is a quarter-dollar (1s.) The next bridge below the one just described is a remarkable erection, which has been finished and opened since I was there. It is a railway bridge on the cantilever principle, and was built out from both sides simultaneously on what is known as the "overhanging" plan. It is over the Lower Rapids, and it was, therefore, impossible to secure any resting-place between the two steel latticed piers, which stand at the foot of the cliffs on both sides. The distance between the piers is 500 feet, and the height above the water is 245 feet, or about the same as that of the Clifton Bridge. Before the bridge last described was opened for traffic, it was covered with a double line of loaded locomotives, and under that enormous strain the gigantic steel trussed girder of which it consists was deflected only about an inch. The third bridge (the oldest of all) is close to the one last described. It is a suspension bridge for railway, horse, and foot traffic. Its height is 245 feet, and the span from tower to tower is 821 feet. This bridge has been in use nearly 30 years. It was built by Mr. J. A. Roebling, who has since designed a still more wonderful monument of engineering skill in the gigantic and costly bridge which was last year opened over the East River, between New York and Brooklyn. Of this great work I hope some day to give an account.

THE ROAR OF THE FALLS.

There is one thing about Niagara which, in my opinion, has been grossly exaggerated—that is, the roar of the Falls. It is common to hear it asserted that the sound can sometimes be heard at Buffalo (18 miles off) and even at much greater distances. There is, of course, no knowing to what lengths the sound may go in specially favourable conditions of the atmosphere; but that it is commonly heard at great distances I can myself deny on the evidence of my own senses. On our first arrival at Niagara, the noise of the train completely drowned the roar of the Falls; and at no time, even when we were closest to them, did we experience much difficulty in making ourselves heard. Dickens and other careful observers say that they could never hear the Falls beyond a distance of two or three miles, and Dickens thinks the deep basin which receives the water as it falls is unfavourable to the spread of the sound. Whatever the explanation may be, the fact remains.

The sound is sweet, musical, profoundly deep and solemn, like the deepest tones of some gigantic organ; but there is no terror in those ceaseless thunderings. The French window of my room at the Clifton House opened on a verandah which faced the falls, and I long lingered outside in the darkness, gazing in the direction of the mighty downpour. Until a late hour, the owners of Prospect Park kept an electric light blazing full upon the American Fall. The lighting was very imperfect; but where the light happened to fall directly, the water sweeping over the precipice looked precisely like straight, smooth, skeins of glossy silk hanging over the edge. When the light was ultimately withdrawn, the darkness was intense. Even the snowy foam in the great basin was hardly visible. There was, nevertheless, a fascination in the subdued but eternal roar, coming up from that scene of turmoil, which kept me long from my bed; and when, at last, I closed the Venetian doors and the window, and lay down with my mind and heart full of what they had drunk in during that eventful day, the soft, deep, but withal monotonous music of the cataract was barely sufficient to lull me pleasantly to sleep. A mother's cradle lullaby could hardly have been more conducive to repose.

THE WATERS STOPPED.

It is natural to think of Niagara as having poured down its flood unceasingly through countless ages such as only the geologist is competent to estimate; for it is difficult to imagine that flood checked, even for a moment, by any of the forces which we usually see at work around us. It is, however, a fact that at least once since Europeans have dwelt on its banks, the torrent almost entirely ceased to flow for many hours at a stretch. In March, 1840, after a very severe winter, the ice on Lake Erie was suddenly broken up by a gale, and driven in immense masses into the entrance to the Niagara River at Buffalo. The effect was very remarkable. The river actually ran almost dry, and the singular sight was witnessed of hundreds of people walking about in the bed of the Upper Rapids close to the Falls, fishing, securing stray logs of timber which had grounded, and poking their noses into odd nooks and corners which, as far as could be known, had never before been exposed to human gaze. The sight was a rather melancholy one, and the Niagara folk were not sorry, when they rose next morning, to find the whole of their vast system of water-works going it as usual.

A VOYAGE THROUGH THE WHIRLPOOL.

It must not be hastily assumed, because Captain Webb failed to swim the Whirlpool Rapids, that nothing has ever got through them alive. There used to be a tiny steamer, called the *Maid of the Mist*, which carried visitors into the cloud of spray under the Horseshoe Fall where no ordinary boat dared venture. For some reason or other, her operations were confined to the Canadian side. Therefore, she did not pay, and it was decided to take her down to Lake Ontario. According to some accounts, her owner sold her, conditionally on her being delivered at Lewiston, three or four miles below the Whirlpool. Another story is to the effect that the boat was in danger of being seized for debt. Anyhow, it was decided to run the gauntlet of the Whirlpool Rapids. Mr. Robinson, her captain, consented to go with her and steer her, and he was accompanied by Jones, the engineer, and a mechanic named McIntyre. With a shriek from her whistle and a white puff from her escape-pipe, the boat ran up the eddy a short distance, then swung round to

the right, cleared the smooth water, and shot like an arrow into the rapid under the bridge. Robinson intended to take the inside curve of the rapid, but a fierce cross-current carried him to the outer curve, and when a third of the way down it, a jet of water struck against her rudder, a column dashed up under her starboard side, heeled her over, carried away her smoke-stack, started her "overhang" on that side, threw Robinson flat on his back, and thrust McIntyre against her starboard wheel-house with such force as to break it through. Every eye was fixed, every tongue was silent, and every looker-on breathed freer as she emerged from the fearful baptism, shook her wounded sides, slid into the Whirlpool, and for a moment rode again on an even keel. Robinson rose at once, seized the helm, and set her to the right of the large pot in the pool, then turned her directly through the neck of it. Thence, after receiving another drenching from its waves, she dashed on without further accident to the quiet bosom of the river below Lewiston. Thus was accomplished one of the most remarkable and perilous voyages ever made by men.

THE MAKING OF NIAGARA.

No intelligent mind can help raising the question, with regard to a great natural phenomenon like Niagara: "How came this to be where it is and what it is?" So far as Niagara is concerned, the geologists have pretty well answered the question. That is to say, they have traced the history of the cataract back through at least one period of geologic time. Sir Charles Lyell, Professor Tyndall, and other eminent scientific men, both European and American, agree that there are distinct evidences on both sides of the great gorge that that gorge itself is a comparatively modern work. The elevated plateau, or table-land, through which the river still flows placidly for the first 16 or 18 miles of its course, clearly extended unbroken to Lewiston, where the general level of the country falls somewhat suddenly to within a few feet of the level of Lake Ontario. If we imagine the gorge which now exists to be filled up level with the tops of its cliffs, and the river to flow over the closed gorge instead of through it, finally descending in a great fall to the lower level at Lewiston, we shall, as I understand the matter, get a mental picture of the district as it existed about 40,000 years ago. That is to say, the Falls were formerly seven miles nearer Lake Ontario than they are now, and have gradually eaten their way back to their present position. Those who are accustomed to sneer at the deductions of science will, of course, laugh at this theory. I must not here go at length into the reasons which the geologists advance for their belief. I can only say that they appear to me to be so conclusive that no unprejudiced mind can possibly deny their force. The truth is, the very process which Sir C. Lyell tells us has been going on at Niagara for thousands of years is going on there now before our very eyes. I have already spoken of the great falls of rock which have taken place of late years in the centre of the Horseshoe Fall. These have been on such a scale as to have appreciably changed the shape and position of that Fall within the memory of living men. The bed of the river above the Falls consists of a hard limestone, which of itself would resist the wear and tear of the water successfully. But this stratum of hard material rests on layers of loose shale, which are exposed to the violent action of the water at and near the foot of the Fall. The shale, of course, is gradually softened, disintegrated, washed away. The

foundation being thus removed for a certain distance, the limestone above is left without support, and some fine day a great mass of it breaks off and falls into the abyss. The same process is at once re-commenced, with similar ultimate results; and so the Falls are slowly pushed back up the river, in the direction of Lake Erie. The further they recede, the thicker becomes the limestone and the thinner the shale. The geologists believe, therefore, that they will some day reach a point where the whole depth of the cliff will be limestone, and "at then the Falls will become comparatively stationary. It is believed that their position is at present receding at the average rate of about one foot a year. If they have moved up from Lewiston at this rate, they must have taken something like 35,000 years to eat out the seven miles of gorge. It is not satisfactory to know that, as the Falls recede, they will probably lose in height and in grandeur; but as there will be no material change for some thousands of years, the matter is not one which much concerns the existing generation.

In connection with this matter, I may as well refer to the fate of Table Rock. This was a vast overhanging mass on the Canadian side, from which a superb view of the Horseshoe Fall used to be obtained. Every visitor made a point of standing on Table Rock. On the 26th of June, 1850, a stableman was on the rock, engaged in cleaning an omnibus, when the whole neighbourhood was shaken as by an earthquake. Table Rock had fallen bodily into the raging cauldron at the foot of the Fall, carrying the omnibus with it. The man had escaped as by a miracle. The mass of rock which fell was 200 feet long, 60 feet wide, and 100 feet deep where it separated from the bank. This event supplies a further illustration of the slow but sure operation of the forces which are gradually driving the cataract back towards Lake Erie.

THE VOLUME AND POWER OF THE FALLS.

Sir Charles Lyell estimated that ninety thousand millions of cubic feet of water passed over the Falls every hour, while Professor Dwight put the quantity at a hundred millions of tons per hour. There is a vast difference between these estimates, and I cannot help thinking that either Lyell, or somebody quoting from him, has added a cipher too much to the stupendous figures. There ought to be no difficulty in making an approximate estimate. The exact width, depth, and rapidity of the current can be easily measured above Grand Island, and these are the only elements necessary to the calculation. Taking, however, Dwight's much smaller figures as somewhere near the mark, we learn that more than one and-a-half millions of tons pass over every minute. It is easy to write the figures, but it is impossible to grasp their real meaning. I calculate that the fall of this quantity of water every minute from a height of 180 feet develops about fifteen millions of horse-power. My mechanical readers will tell me if I am far wrong. This power, I should say at a rough guess, greatly exceeds the combined power of all the locomotive engines in the British Empire. That is to say, if all the locomotives in the Empire were turned into pumping engines, their united efforts would be unequal to the task of pumping back to its former level the water which comes down at Niagara.

"Why all this waste? Why is not this prodigious power utilized in turning mills, and doing the hard work of the world generally?" Such are the questions which I hear somebody ask. But where is the waste? "Man doth not live by bread alone," and a thing's use-

fulness is not always to be measured by the number of yards of calico it can be made to weave. We do not seek to enrich the soil with the bones of our mighty dead, neither do we build our houses and factories out of the ruins of venerable structures whose every stone is a poem or a fragment of history. In other words, we do not subordinate *everything* to the necessity of supplying the mere physical wants of the human race. As long as there are men and women capable of being moved to the profoundest depths of their nature by the most marvellous displays of beauty, grandeur, and power, there will be no waste at Niagara, even if not a bucketful of its mighty flood is ever abstracted for the turning of a wheel. This reminds me, however, that a little of the water is already abstracted for some such purposes. Apart from the paper-mill already referred to, which is really in the rapids, and therefore does nothing to diminish the bulk of the Falls, there are one or two manufacturing concerns which derive their power from the cataract. But they are able to utilize only a small part of the total fall of 160 feet, because, as before explained, the land on both sides of the river below the Falls retains the same level as the banks above the Falls. To utilize the fall fully, it would be necessary to conduct the water by artificial channels from the Upper Rapids down to the point where the gorge ends and the general level of the country suddenly falls. As it is, the few factories which use the water have to discharge it into the gorge, at a depth of only 20 or 30 feet, through channels cut through the rock. These discharges are like tiny cascades trickling down the cliff. What they take is like a drop abstracted from the ocean, but it is well to know that there is no likelihood of any other such "water rights" being created.

NUISANCES.

One's enjoyment of this great natural show is greatly interfered with by the crowd of people always lying in wait to levy blackmail on the visitor. It is impossible, indeed, to see the Falls and the Rapids thoroughly except at an expense of several dollars. The shore on the Canadian side is open to the public, being a highway; but almost every other point of view is private property, whose owner levies a toll more or less reasonable. The approaches to every point of view are, moreover, beset by photographers pestering the visitor to "sit" with the Falls for a background, with the owners of museums full of trumpety articles which have no necessary connection with Niagara, with the sellers of dear "Indian curiosities" made probably in Paris or New York, with hackmen whose charges range from a dollar a mile up to anything which can be squeezed out of the most squeezable of mankind. At every step, one has to run the gauntlet of these importunate harpies, and the result often is to ruffle the temper and unfit one for the full enjoyment of the great sight. The extortions of Niagara dealers and hackmen have become proverbial, and some curious stories are told on the subject. It is said, for instance, that one dodge of the hackmen is to bargain to drive a visitor to a certain point for a moderate sum, and then charge him two or three times as much to bring him back. Here is how one American writer describes his adventure with one such driver:—

"When I first got to Niagara, the hack drivers took a fancy to me, and chased me up. We conversed thusly: 'Take a ride?' 'No.' 'Goat Island?' 'Luna Island?' 'Suspension Bridge?' 'No.' 'Lundy's Lane?' 'Waal, hasn't been to Lundy's Lane. Who's Lundy?' 'Why,' says he, 'theer is where the American Eagle soared aloft and plucked the tuft from the British Lion. They keep

it there to show strangers.' Says I, 'How much for Lundy?' 'Waal,' says he, 'I'll take you there for a dollar.' I got there. It was two or three patches of grass, and a brindle cow, and a fence, and a country lane. The driver said I'd better pay, so I gave him a dollar bill. Says he, 'We're in Canada, and I want gold.' Says I, 'Hain't got no gold.' Says he, squaring up, 'You little withered cuss, if you don't come down with a quarter, I'll punch your head.' Punching don't agree with my head, so I gave him a quarter and told him to drive back. He said the price for going back would be five dollars. 'No,' says I. 'Yes,' says he. 'Then I'll walk,' says I. 'Walk, and be darned,' says he. I walked, and he walked his hoss alongside for a mile. 'Hot?' says he—'shower coming.' On we walked—down came the rain. 'I think I'll get in,' says I, handing the five dollars. Says he, 'I want another dollar now.' 'But,' says I, 'you told me you'd take me back for five dollars.' 'Aye,' says he, 'but you see it was pleasant then, but it's raining now.' I gave him the money, and got back to the hotel. But I don't take hacks no more."

PROPOSED INTERNATIONAL PARK.

I am glad to say there is some hope that ere long the nuisances I have described will be abated. The Governments of Canada and the State of New York have for some time past been in negotiation with each other, for the purpose of devising a scheme for buying out the leviers of tolls and all other owners of vested interests, and throwing the whole of the points of view open to the world, free of charge. The Marquis of Lorne, the late Governor-General of Canada, was a very zealous advocate of this measure, and the Legislature of New York has begun to move. A party of surveyors was occupied in making a plan of the locality when I was there last July, and I trust we shall soon hear that something still more decisive is being done. The Americans have not neglected the lessons of experience. They are determined that no other collection of grand natural phenomena—the common heritage of all mankind—within their borders shall become private property. The beautiful Yosemite Valley in California, and the wonderful geyser district which has of late years been brought to light around the head waters of the Yellowstone River, have been set aside as free national parks for ever. This is as it should be; but it is only right that Niagara should be redeemed and placed on the same footing. A Manchester writer, who has recently visited the Falls, grows eloquently indignant over their present condition, and expresses a fervent hope that the two Governments concerned will "make a scourge of cords and drive the money-changers out of this great temple." This wish must be fervently echoed by everybody who has been to Niagara.

HOTELS.

The Niagara hotels are numerous, but dear. Those commanding the best views of the Falls are on the Canadian shore. Indeed, the relative position of the Falls and the banks is such that it would be difficult to get a complete view of the whole cataract from any point on the American side. The Clifton House, at which we put up, enjoys on the whole the most commanding position. One or two of the Canadian hotels are nearer the end of the Horseshoe Fall. But this proximity is sometimes a great disadvantage. It was so at the time of our visit. The great cloud of mist, coming up from the foot of the Fall, was carried by the wind over the nearest of the hotels and precipitated upon it

and all around in the shape of a thick persistent drizzle, which rendered everything most uncomfortable, and necessitated the continual use of umbrellas or water-proofs over an area of several hundred yards' radius.

NIAGARA IN WINTER.

I am told that nobody has seen Niagara in its greatest and most wondrous beauty who has not visited it in the winter. This I can well believe, judging from some photographs I saw on the spot. The trees and shrubs are covered with the most brilliant coruscations of snow and ice; the islands and the rocks are robed in the same spotless vesture. This, of course, is mainly due to the falling and freezing of the everlasting cloud of misty spray. But the most imposing of the wintry features of the scene is an immense mound of ice which is gradually built up in front of the Falls. This is made up of blocks of ice floated down from Lake Erie, cemented together and enlarged by the freezing spray. The mound is sometimes 20 to 40 feet higher than the top of the Falls, and forms the finest possible stand-point for those who are prepared to run a little risk in order to get a close front view of the cataract. An ice bridge also extends, for two or three months, from the front of the Horseshoe Fall to near the first suspension bridge.

IMPRESSIONS.

He or she must be more or less than human who can view Niagara without a moistened eye and a quivering lip. That some who have taken only a hasty glance from a single point of view may have gone away disappointed, is possible. But it is to me inconceivable that any man, possessing ordinary human qualities, who has looked at the whole stupendous assemblage of phenomena from various points of view, can remain unmoved and unimpressed. Niagara has suffered much of many writers (and, as perhaps somebody may remind me, is suffering more at this moment at my own hands); but, however much it may have been prejudiced in other ways, it can hardly have suffered from exaggeration. I have seen many things and many places which have been over-written, and I have been disappointed accordingly; but when I had stood on the verge and in the midst of the Horseshoe, had looked over the very edge of the American Fall, had seen both cataracts face to face from the suspension bridge, had viewed the Upper Rapids from the Three Sisters and the Whirlpool Rapids from the bottom of the great gorge, I was fain to confess that I had never yet read an adequate description of Niagara—nay, more, that I could never hope to read one.

The emotions produced in visitors appear to vary greatly. Dickens tells us that the effect in his case was a great, deep, abiding peace. Strange that such a sight of such a conflict of Titanic forces should produce calmness and tranquillity! Other writers tell us that they burst into a flood of tears at the first full view of the Falls. In my own case, I confess the overwhelming sense of Power—of remorseless, resistless, unrelenting Energy—was uppermost. I felt small—smaller than I had ever before felt in my life, and I knew that the experience was a wholesome one. For it does us good occasionally to measure ourselves and the boasted fruits of our science and our engineering against these mighty exhibitors of natural force. If I wanted a description of Niagara to put in a nutshell, I should call it simply "Strength married to Beauty." All else that has been said, or can be said, is, or would be, but an amplification of this brief text.

BUFFALO.

On leaving Niagara, on Thursday, July 26, I said "Good-bye" to my travelling companion for 10 days, arranging to meet him at the Palmer House, Chicago, on the following Sunday week. During those 10 days, he visited his friends in Canada, and I visited mine in Michigan.

My most direct way into Michigan, on leaving Niagara, would have been straight through Canada to Detroit; but as I wished to have a look at Buffalo and Cleveland, I decided on going by the Lake Shore line, which skirts the southern bank of Lake Erie throughout almost its entire length. From Niagara to Buffalo by the Canada Southern Railroad is somewhat over 20 miles, the line crossing the Niagara River in the outskirts of Buffalo. The bridge, of course, connects Canadian territory with the State of New York, and as I approached it I began to have troubled visions of the American Customs officials who, I knew, kept guard over the passage. The reality was, however, less formidable than the anticipation. As the train entered on the long bridge, the baggage man came through the cars and told us that those who had baggage in his car must go there and open it. I obeyed, taking care to throw my trunk and portmanteau wide open, as if to say: "Do your worst. You'll not find me trying to chisel Uncle Sam. I have nothing to conceal." The official presently sauntered into the car, throw a single glance into each of my packages without touching either, and told me I could close them. If this were the sort of "examination" to which baggage is usually subjected, it would not be surprising if smuggling were carried on in a wholesale fashion. But, if I may judge from what I have seen, it is the rule for search officers to do their work thoroughly just about often enough to maintain a wholesome feeling of uncertainty among would-be smugglers. Now and then, for no apparent reason, they will swoop down upon one particular person's packages and insist on overhauling their contents down to the very bottom. I have seen the largest and most elaborate of trunks selected for this process, and have witnessed the dismay and anger of the feminine owner as tray after tray, brimfull of dainty finery, was lifted out, and the knowing hand of the officer was ultimately thrust down at each corner of the residuum of heavier material until the hard bottom was fairly touched. When trunks have been carefully packed in the first instance, and, as is usually the case, crammed to their utmost capacity, it is enough to provoke a saint to wrath (and to its forcible expression too) to have to re-pack the loosened and stirred-up mass, especially when this has to be done in an open, dirty shed, in the presence of a curious and unsympathetic crowd, and under the consciousness that the officer's excessive zeal for his country has already caused you to lose your favourite train. But I have no doubt that this kind of occasional thorough examination is made on system, and that the system will continue to be absolutely necessary as long as customs duties are levied. Everybody sees that it is all uncertain whether he will be troubled or not. He may not be—the probability is that way. But then he may be; and if he is, he may have to pay dearly for any attempt he may be tempted to make to defraud the revenue. The question is, whether the chances are worth running—whether the game is worth the candle, and all except the most reckless decide in the negative.

A SMART YOUNG MAN.

My first business on entering Buffalo (as it is on entering any strange city) was to secure a map of the place, and I went into the first book-store I saw and asked for one. The clerk behind the counter (all shop assistants are called "clerks" in America) promptly handed me a folded pocket plan. Knowing how rapidly Buffalo had been growing of late years, I took the precaution to ask if the map was brought well up to date.

"Up to last night!" replied that smart young man, without winking or a moment's hesitation.

My ideas, unfortunately, move more slowly than those of a Yankee book-store clerk, or I should have instantly responded to that smart young man thusly:—

"Only up to last night? What's the use of a map of that sort in a city which grows visibly before one's eyes, as Buffalo does? Take your map back. I must have one which shows all the streets and railways that have been built and opened this morning!"

But as this did not occur to me at the time, I did not say it. On the contrary, I regarded that smart young man with silent awe, humbly paid my quarter-dollar, and carried away the map. But I shall be ready for him next time.

WHAT BUFFALO IS LIKE.

I had only a few hours in Buffalo, and had, therefore, no opportunity of inspecting the sights of the city in detail. But, by the aid of the map "complete up to last night," I was able to see enough of the place to obtain a fairly accurate idea of its general appearance, the plan on which it is built, the extent of its prosperity, and the character of its surroundings. In all these respects, I carried away a very favourable impression.

The city stands at the point at which the Niagara River flows out of Lake Erie, and (which is more important) close to the entrance of the Erie Canal, which connects the lake with the Hudson at Albany, and thus with New York. Buffalo is, after New York and Brooklyn, the largest city in the State of New York. It was first settled as recently as 1801, became a military post in 1812, was burned by a force of Indians and British in 1814, and was incorporated as a city exactly 50 years ago. Its progress would be regarded as marvellous, were it not that Chicago, San Francisco, and other cities, have made still more rapid strides. The population in 1870 was 118,000; in 1880, it was 155,000; and when I was there last year the city newspapers were boasting that it had just passed 200,000. Situated at the point where the lake navigation ends and the canal navigation begins, and on the finest harbour to be found on the whole circuit of Lake Erie, Buffalo enjoys an enormous and ever-increasing trade. Its manufactures are varied and extensive, the chief being iron, copper, tin, and brass goods. The climate is regarded as specially favourable to malting and brewing, which are accordingly carried on on a very large scale. The water front of the city measures nearly five miles in length, of which half is on the lake and the other half on the Niagara River.

Buffalo is regularly laid out and well-built, and it abounds in fine public buildings, and in religious, educational, and benevolent institutions. The principal thoroughfares run far and straight out into the suburbs, and are extremely beautiful. They are everywhere lined with handsome shade trees, and in the outskirts of the city they are fringed with villas and mansions innumerable. No European can walk or ride

for the first time through these noble avenues, remembering the fact that this great city, now nearly as large as Bristol, has been positively created within the last half-century, without being amazed at the apparently endless evidences of wealth and comfort which crowd upon his vision at every step. He sees, it is true, no great hall or castle, embosomed in greenery and isolated amid a far-stretching sea of emerald turf—the ancestral home of an aristocratic millionaire. But, charming as such a sight is, he gazes upon something better still. He sees the homes in which thousands of families are surrounded with all the comfort and refinement which moderate wealth can procure. I had heard and read a good deal about the amazing prosperity of the American cities, but I never fully realised it until I had ridden through the suburbs of Buffalo. I then discovered that, even if America possesses a plutocracy, whose road to wealth is not always the cleanest, and whose use of wealth, when they have obtained it, is not always the wisest, there is, nevertheless, a very wide distribution of the greater part of the fruits of labour and enterprise. The Vanderbilts, the Goulds, and the Mackays may amass their millions by means of their lucky discoveries or their more or less shady speculations, but it is perfectly clear that they and their class intercept only a small part of the vast total of wealth which is annually produced. The mass of it is divided among large and numerous classes; and the result is a higher average standard of comfort than is to be, or perhaps ever has been, found in any other country in the world. There may possibly be poverty even in Buffalo; but if there is, it is of a more than usually retiring disposition. I saw no trace of it, either in the form of wretched dwellings, shabbily-dressed people, or actual beggars. The whole city, from end to end, bears the impress of abounding prosperity.

I entered one of the many tram-cars on Main Street, the principal thoroughfare, and told the driver to take me as far as he went. He connected with another line of cars which ran still further into the suburbs. Seeing that these cars were filled with well-dressed, happy-looking people, mostly children, who were going in what my map told me was the direction of the principal park, I contrived to secure standing-room on one of the car platforms, in order to go with them. That was the fullest car I ever saw, or expect to see, in this life. The seats, the floor, and the platforms were so tightly packed with human bodies that we got almost inextricably entangled, arms with arms, legs with legs, and umbrellas with sunshades. A little boy on the front platform found it impossible to keep his head out of the way of the brake handle, and it presently flew round and struck him a violent blow on the forehead which instantly caused a swelling as large as an egg. The poor little chap bore the pain like the hero that he evidently was. Thinking, just then, of British regulations of railway and tramway traffic, I civilly and innocently asked the driver how many he was allowed to carry. From that moment that man was my enemy. He looked hard at me and took in the situation at a glance. He then assured me, in a surly tone, that that was a free country, and that tyrannical British regulations about the number carried were unknown over there. The number he carried, he said, was as many as could hold on—which was obvious enough. He said no more, but he now and then cast a somewhat suspicious and ill-tempered

glance at me, as if, after all, he knew that he was breaking certain regulations, and suspected that I might turn informer. By the way, it may possibly be true that the authorities of Buffalo place no restrictions on the numbers carried in street cars, but it is quite certain that the authorities of many other places do, this surly driver notwithstanding. The Buffalo people are evidently accustomed to this overcrowding, for on this occasion they submitted to be packed in with a patience and good humour which were truly admirable.

The car finally stopped amid the closely-wooded outskirts of a charming park, and the tangled mass of humanity which filled and covered the car was gradually pulled to pieces, and resolved into so many hot, bruised, and crumpled, but withal merry people. The place was a perfect Paradise, amid which hundreds—I might probably say thousands—of young people were preparing to make an afternoon of it in jolly style. There were picnic parties innumerable under the trees, boating to any extent in pretty boats on a charming lake, under the watchful eye of officers in uniform. The children played; their parents and guardians lay on the turf and watched them or read their newspapers; while those of an intermediate age engaged in flirtation just for all the world as young people do in Europe, and as if the passage of the broad Atlantic had in this respect failed to affect human nature to the slightest extent. The sight was a pretty one, and I long feasted my eyes upon it from the vantage ground of a beautiful pavilion at the head of the lake. When it was time to move on, I walked through the whole length of the park by a raised path parallel with the lake, and a more charming walk (barring the intense heat) I have seldom enjoyed. Coming out of the Park, I made for the principal gate of the Cemetery, which is close at hand. I then found that admission was by ticket, to be obtained at an office in the city; but the porter let me in without a ticket the moment he discovered I was an Englishman; "for," said he, "I came from Kent myself." Why this should justify him in breaking his rules I did not wait to inquire. I thanked him and went in. The Cemetery is a fine one; but as I saw much finer ones later on, I need not attempt to describe it.

CLEVELAND.

From Buffalo to Cleveland is 173 miles by the Lake Shore Railroad, which runs parallel with the coast of Lake Erie all the way. As I made the journey by night in a sleeping car, I can say nothing from actual observation as to the character of the country. The line is mainly in the States of New York and Ohio, but between those States it also traverses the extreme north-west corner of Pennsylvania, where the otherwise rectangular form of that great State is somewhat departed from, apparently for the express purpose of giving it a footing on the lake. The city of Erie is the principal lake port in Pennsylvania. A few miles further west, in the State of Ohio, is Ashtabula, a place whose name has for the Americans the same awful associations as those of Abergele and the Tay Bridge have for us. It was at Ashtabula that, one winter's night not long ago, a train on the Lake Shore line fell through a high trestle bridge. The wrecked cars, heaped up upon each other and filled with the maimed and dead, took fire, and thus horror was added to horror. Many were killed outright by the fall; many others were burnt to death; and, strange to say, some, who

happened to escape the fire, perished of cold in the frozen creek below. The accident was probably the most appalling that ever happened on any American railway. I passed over the restored viaduct while asleep, or trying to sleep (for this first night's experience of a "sleeper" was not a happy one), or I should have found a melancholy interest in looking down upon the scene of this great calamity.

I reached Cleveland early in the morning, and was astonished to find that the great Union Depot, which I had seen portrayed in sundry railway advertisements, was nothing better than a huge, gloomy, dirty shed. It was broad daylight, but so dark was this shed that I had some difficulty in seeing to collect my belongings before alighting from the car. This place, as I afterwards discovered, is a fair sample of a large number of the principal railway stations. No stranger can fail to be struck with the contrast between the darkness and griminess of these sheds, and the splendour of the Pullman cars in which one enters and leaves them. There are fine railway stations in America, quite equal, in some instances, to anything we can show on this side the water. I may, for instance, mention the Boston terminus of the Providence Railroad, which is a model one. But in most cases the great American stations are far inferior to ours, in convenience, cleanliness, lightness, and general attractiveness.

THE FINEST AVENUE IN AMERICA.

As I had to push on to Detroit to sleep, I had not much time in Cleveland, and I accordingly proceeded at once to find the two things which I had called there specially to see. These were—first, the beautiful and famous Euclid Avenue, of which I had been led to form very high expectations; secondly, the temporary tomb of the murdered Garfield. As usual, I procured a map of the city at the outset, but in this instance I had to be content with a general assurance that it was brought "up to date." A first glance at the map showed me that Euclid Avenue led straight out to Lake View Cemetery, the spot where the late President was sleeping the sleep that knows no waking. The distance was four or five miles, and I entered a street car bound for the Cemetery gates. The journey lay almost entirely through Euclid Avenue, the famous thoroughfare I have already mentioned, and I am bound to say it is worthy of its high reputation. The Clevelanders "claim" (to use an Americanism) that it is the finest avenue in the States.

Cleveland is a rich and prosperous city. Apart from its other manufactures, which are very extensive, it is largely interested in the oil trade, which has of late years attained gigantic proportions. It is not far from the rich oil districts of Pennsylvania, and some of its leading citizens have made enormous fortunes by means of their speculations in petroleum. I shall, perhaps, have occasion further on to refer to the corrupt and mischievous monopoly which some of these oily millionaires have contrived to establish; but my present object is simply to make the fact clear that a considerable part of the vast profits derived from the oil wells has found its way to Cleveland. The citizens who have been enriched in this and in other ways have combined to line almost the whole of the vast length of Euclid Avenue with a succession of mansions which, for variety and beauty of architecture, for charming surroundings, and luxurious appointments, can have few rivals either in the Old World or in the New. And let no reader laugh at this statement when I add that many, perhaps most, of

these superb residences are built of wood. It is, perhaps, natural for an Englishman to sneer at a wooden house, as an erection necessarily uncouth in appearance, and incapable either of resisting the extremes of temperature, or of lending itself to the requirements of a luxurious age. But such a conception is utterly without foundation. No man who has once walked or ridden through Euclid Avenue, Cleveland, or California Street, San Francisco, will ever again speak contemptuously either of the beauty, the stability, or the comfort of "frame" houses, as houses of wood are called in America. Without making a very close inspection, it is sometimes impossible to discover whether a mansion is of wood or of stone. So elaborate and costly may a wooden house be made, that the railway and silver kings of San Francisco are said to know how to spend a million dollars on a single residence. There are probably no million-dollar palaces at Cleveland, but there are hundreds of charming residences which none but very rich men could either build or inhabit, and many of them are on Euclid Avenue. They usually stand well back from the street, in the midst of a wide girdle of trees, shrubs, and beautiful turf, whose exquisite verdure is maintained by a lavish use of miniature, portable, revolving fountains, which scatter water in the form of spray, now in one place and presently in another. All private houses in the suburbs of American cities have a raised platform, or stoop, extending along the front and approached by a flight of steps; and I noticed that some of the finest of the Cleveland mansions had handsome carpets laid from their front doors, down the steps, and along the private paths, to the very edge of the sidewalk. The Clevelanders are evidently less in fear of rain in July than we are in England. I noticed, further, in Cleveland as well as in other cities, that these beautiful lawns and shrubberies are often entirely open to the street, and I gathered from this that the street Arab, and the mischievous rough who works mischief for its own sake, must be almost or altogether unknown. I know no city in England where such exposure would be safe.

The platform or stoop of an American house is in summer the regular evening rendezvous of the family and its visitors. It is usually well supplied with comfortable rocking chairs of the favourite pattern, and there, at the close of the day, the ladies or gentlemen of the household, or both, may be seen reading their newspapers, smoking their cigars, doing their needlework or knitting, or pleasantly chatting, gently rocking themselves all the while. This pleasant custom is not regarded as "vulgar," or "peculiar," or defiant of the "proprieties," even by the best society, and in this respect the best society shows its good sense. The British Mrs. Grundy, of course, objects to anything so unconventional, and asks, with hands uplifted, "Whoever heard of such a thing as respectable people sitting outside their front doors, reading or smoking?" But, happily, Mrs. Grundy is not of much account beyond the Atlantic, for Americans are not accustomed to value a thing according to whether it has or has not been heard of before. In this respect, we should do well to learn of them, though I am bound to say that in some other matters we can show them a wrinkle or two.

GARFIELD'S BORROWED TOMB.

Lake View Cemetery is the newest of the four beautiful burial-grounds in which Cleveland lays its dead. It is of large area and undulating surface, and

is charmingly wooded. The remains of President Garfield were, I was surprised to find, lying in a borrowed tomb, there to remain until such time as a sufficient sum of money could be raised to provide him with a mausoleum of his own, on a scale befitting his high position and noble character, and fully expressive of the profound grief which his cruel martyrdom excited. Who the Joseph of Arimathea was who had thus found a temporary resting-place for the slain President, I forget; but the tomb bore his honoured surname. It had apparently been built for the reception of himself and his family; and, like that other borrowed sepulchre of which my readers must by this time be thinking, it was, when Garfield died, one in which no man had ever yet laid. The tomb consisted of a solid stone erection, all above ground, facing one of the main cemetery avenues. Three sides of the chamber were of masonry. The fourth—the one next the road—consisted simply of a heavy iron gate. The handsome "casket" containing the General's remains, and the heap of once beautiful wreaths which lay upon it, were, therefore, visible through the bars to every passer-by. On the other side of the road, immediately opposite the tomb, was a wooden hut, in which soldiers of the Federal Army or of the State Militia were on guard night and day. This precaution was no doubt suggested by the mysterious disappearance of the body of Mr. Stewart, the New York millionaire, which had been stolen, in the hope, no doubt, that his distressed widow would offer a large reward for its recovery. The reward was never offered, and the body accordingly never came back.

A box to receive subscriptions towards the cost of Garfield's permanent tomb was affixed to the bars of the gate of his temporary resting-place, but I fancied it responded with a rather hollow sound when my own modest donation touched the bottom. I gathered, indeed, from the talkative lady proprietor of a restaurant just outside the cemetery gates, that the fund was making rather slow progress—a fact of which she spoke with some indignation. I am not aware if any beginning has yet been made with the permanent erection, but there can be little doubt that the necessary funds will ultimately be provided either by public subscription or Government grant.

LEGS DOWN!

As I returned from the cemetery to the city, an incident occurred which tended to dispel some of the preconceived notions of American habits which we are accustomed to cherish in this country. I was hot and tired; and remembering, I suppose, that Americans are a free-and-easy people who put their feet anywhere, even to the extent of hanging them out of their windows or depositing them on the mantel-piece, I took the liberty (the car being nearly empty) of laying one of my legs horizontally along the wooden and uncushioned seat on which I was sitting. The conductor no sooner noticed my attitude than he came along the car to me and politely requested me to put my leg down, remarking that I might soil the seat and that possibly a lady might want to sit there presently. I obeyed, of course; but I confess that I was a little taken aback to find an American car-conductor so "precious particular" on a subject on which, as I thought, every Yankee "did as he darned please." After this, I was somewhat prepared to be told, as I was some weeks later at Council Bluffs, to put my hand-tag on the floor of a railroad car, because, as the conductor put it, "seats were made to sit on." On

these and kindred subjects, we are, perhaps, a little too prone to take the Americans at their word, without making full allowance for their humorous exaggerations. We read, for instance, in one of their papers, that a Kansas City man, when he wants to consult his lawyer, looks up at the windows of the learned man's chambers to see if his boots are hanging out; and if they are not, he knows the owner of the boots is not in. We forthwith rush to the conclusion that, even if this picture is a little over-coloured, the Americans must certainly be in the habit of constantly putting their legs and feet in very extraordinary places. Such is not the case, to anything like the extent we are apt to suppose. In the course of my travels, I certainly saw a few pairs of boots on a level with the wearers' heads, or even higher; but I am bound to say that the attitude is far less common than I had thought.

FACTS ABOUT CLEVELAND.

Cleveland had only 1,000 inhabitants in 1830. By 1870, the population had reached 93,000, and in 1880 it was 160,000. It is perfectly safe to assert that, by this time, it is nearly 200,000. It is, next to Buffalo, the most important port on Lake Erie. The Cuyahoga River flows in a very circuitous channel through the city; and its mouth, which is protected by long piers, forms an admirable harbour. The map, moreover, shows that an outer harbour has been formed by the enclosing of part of the lake by means of a breakwater. The valley of the Cuyahoga is very deep and abrupt, and thus cuts the city in two. Communication between the two parts was formerly very difficult, but the severed halves have of late years been connected by a magnificent high-level bridge, three-fifths of a mile in length, which spans the valley at a great altitude, and on which the city has spent over two millions of dollars. The Ohio Canal, which connects Lake Erie with the Ohio River, enters the lake at Cleveland. The city is also a railway centre of first-rate importance, and its iron works and oil refineries are on the largest scale. Like most American manufacturing cities which have no water power, Cleveland suffers greatly from the smoke nuisance. The coal used in American locomotives, steamboats, and factories is of a very soft kind, and the smoke it emits puts that of Lancashire to the blush for density and extreme blackness. The foul smoke is, in fact, the greatest drawback to the pleasure of travelling, and it has already given some of the new cities a funereal hue of which even Sheffield or Manchester need not be ashamed. Buffalo, Cleveland, Chicago, St. Louis, and Cincinnati are among the smokiest places I have ever seen. As for Pittsburg, the greatest centre of the American iron-smelting industry, it is said to beat Sheffield, our grimmest large town, by very long chalks. I did not go to Pittsburg, being quite content to take a description of the place at second-hand. George Francis Train, the eccentric American who first introduced tramways into London, but who was soon compelled to pull up the rails he laid in the Bayswater Road, is said to have remarked in one of his lucid intervals, and in a moment of inspiration, that Pittsburg was simply "Hell with the lid off."

Cleveland possesses a hundred churches, a beautiful Opera House, handsome and commodious buildings for the transaction of the city and the Government business, three or four hospitals, and a system of water-works by which water is pumped out of the lake at a distance of more than a mile from the shore and dis-

tributed over the city. Owing to the beauty and abundance of the shade trees which line its principal streets and avenues, it is known as the Forest City, and with the exception of Cincinnati it is the largest and most important place in the famous State of Ohio.

DETROIT.

I have now to deal with the last of the three great cities which have sprung up on or near the shores of Lake Erie, and which owe their wonderful prosperity, if not their very existence, to that freshwater sea and its connection with its sister lakes and the St. Lawrence. Buffalo, as I have already explained, is at the eastern extremity of Lake Erie; Cleveland is on its southern shore, while Detroit is near its western end. Lakes Huron and Erie are about 80 miles apart, and are connected by a wide river which, about the centre of its course, widens out into a considerable lake. This is Lake St. Clair. The northern half of the river is called the River St. Clair, and the southern half, which is 20 miles long, the Detroit River. On this river the city of Detroit stands, and it follows, as a matter of course, that all the navigation between the three upper lakes on the one hand, and the two lower lakes and the St. Lawrence on the other, must pass in front of the city. The position is, therefore, a splendid and commanding one. Detroit is, moreover, the point at which some of the Canadian railways connect with the Michigan lines, and it is thus on the through route between the larger part of Canada and New England on the one hand, and Chicago and the Far West on the other. There is no bridge across the Detroit River, but the railroad cars are carried across in large steam ferry-boats, and passengers are thus conveyed through without change.

I travelled from Cleveland to Detroit (150 miles) by rail. The line skirts—first, the extreme southern shore of Lake Erie, and then, turning sharply to the right, the western end of the lake. The two principal cities passed on the road are Sandusky and Toledo. The former is famous for its vineyards. The latter is a pushing, go-ahead place of the regular American type, which boasts that, with a single exception (it probably means Chicago), it has more railways running out of it than any other city in the States. It is, I believe, the meeting-place of no less than thirteen lines. Since 1850, its population has grown from 4,000 to nearly 60,000. It possesses an immense trade in corn, and among its many manufacturing concerns are locomotive and car works, ironworks, furniture factories, flour-mills, and breweries.

Toledo is, however, overshadowed by its big neighbour, Detroit. This fine and pleasant city extends at least six miles along the western bank of the river which bears its own name. Its site was visited by the French as early as 1610, but it was not settled until 1701. It was not until 1824 that it was incorporated as a city. It then contained a population of 2,000; to-day its inhabitants probably number 130,000. I might repeat and apply to Detroit almost all I have said about the vast trade, the wonderful prosperity, and the beautiful suburbs of Buffalo and Cleveland. The description is almost equally true of all three cities. In some respects, Detroit has the advantage of the other two. It is less dirty and smoky in its busiest parts, and the plan on which its streets are laid out is a pleasant variation on that usually adopted. The six principal avenues radiate from a common centre, like the skeleton of a fan; and the other

thoroughfares, which are on the usual chess-board plan, necessarily intersect these avenues at hundreds of points and at all sorts of angles. The great central street, known as Woodward Avenue, begins at the water's edge and runs straight up through the city and its suburbs, and out into the open country beyond, without turning a hair's-breadth to right or left. The lower part of this avenue is lined with fine business premises; but, like Main Street at Buffalo, and Euclid Avenue at Cleveland, it presently merges into a purely residential suburban road, with its rows of shade trees and its numerous elegant and costly mansions. Woodward Avenue is in many respects exactly like half-a-dozen other streets and avenues, and I mention it merely as representative of its class.

The impression which a casual visitor can hardly fail to carry away from Detroit is that it is an eminently pleasant city to live in. The noble river, at least a mile wide, on whose bank it stands, the numerous wide and handsome streets crossing or uniting with each other on a somewhat picturesque plan, the solid and substantial appearance of the buildings, both public and private, the large number of public institutions, all combine to create this impression. The city has grown rapidly, no doubt, but not so rapidly as to have out-run the appliances of civilization. The City Hall, the churches, the Opera Houses, the hospitals, the cemeteries, the grain elevators, the great railroad freight depôts, the Custom House, the Post Office, are all worthy of note, but I cannot go into details here.

Detroit was the first city in which I found the electric light largely used for business purposes. A number of the larger stores on Woodward Avenue use very powerful arc lights to illuminate their fronts, and the effect on the whole thoroughfare is brilliant in the extreme. I had opportunities of seeing the interiors of some of the largest stores. I went with some relatives to a large dry-goods (drapery) establishment on Woodward Avenue. The department they wanted was a considerable distance skyward, and we were at once shown into a lift and carried up to the proper floor. The extent of the concern, the splendour and solidity of the building, the perfection of the appliances and the system, and the enormous extent and variety of the stock, appeared far more appropriate to London or Paris than to a city in what was not long since regarded as a backwood's State. Later in the day, we went into a large music warehouse in another street. Several persons were there trying pianos, with a view to purchasing. One of the "clerks" told me that the firm had recently bought a thousand instruments of a single New York pianoforte manufacturer, that they were all to be delivered, and would probably all be sold, by the end of the year. (It was already the first week in August.) I have no reason to suppose that the "clerk" was romancing. The growth of population is so rapid, the standard of education so high, and the purchasing power of the people so great, that a thousand pianos are no doubt easily absorbed by the extensive and populous district of which Detroit is the centre. I may say, moreover, that the piano trade is a great one everywhere, and it is not every part of the States that depends on New York for its instruments. Nothing more astonished me than to see large piano factories in full work in new and remote cities, where I should have supposed the population had not yet had time to organize any trades except those which were concerned in supplying the bare necessities of life. And this remark does not apply to the pianoforte manufacture alone. Almost

every trade and profession which ministers to the comfort and luxury of the people obtains a footing in the new cities in an incredibly short space of time. It does not at all follow that, because a place is only ten years old and is one or two thousand miles from New York, it is therefore rude and uncivilised, without any of the refinements, luxuries, and amusements of cultivated society. The fact is generally the reverse. Every branch of trade is represented, and the man with plenty of money in his pocket can buy almost anything which his fancy or his tastes may suggest.

THE BOBTAILLED CAR.

It was in Detroit that I first made the acquaintance of the bobtailed car. I afterwards found it in use in many other cities, but may as well say here what there is to be said about it. A bobtailed car, then, is a street tram-car without a conductor, in which the passengers pay their fares by dropping them into a box. At first sight, this arrangement may appear to be particularly favourable to poor or shabby people who may wish to do their riding "on the cheap." But a little experience of the system is enough to convince one that cheating is difficult and rare. The driver stands on a platform at the fore end of the car, the upper part of which, being of glass, allows him to command a full view of the interior. On some cars, indeed, a small mirror, fixed in a slanting position over his head, enables him to keep his eye constantly on what is going on inside without turning. Close beside him, a locked money box is fixed into the framework of the car. This box is in two parts. The upper half is of glass, both front and back, and it has besides a sloping bottom of glass. Into this box each passenger drops his fare through a slit; and the coin, falling on the glass bottom, is fully exposed to the view of the driver as well as of the passenger. The driver, hearing the coin drop, satisfies himself by a glance that it is the right amount, and then, by touching a spring, allows it to drop out of sight into the lower half of the box, which is locked, the key being kept at the car company's office. This leaves the sloping glass bottom of the upper box clear for the display of the next coin, which is treated in the same fashion.

The driver is not allowed to take money under any circumstances, but he gives change to all who require it. This he does with the smallest possible trouble to himself. He has in front of him a box, full of little packages of small change. The packages are of varying value, from a quarter-dollar upward; but every one of them contains at least one 5-cent piece, that being the uniform fare on the street cars in almost every city I visited. The charge at Boston is 6 cents (3d), but that is the only case I remember in which it exceeded 5 cents. The person who needs change walks to the driver's end of the car, pushes open a tiny door in the panel of the car door, and places his coin, without saying a word, on a little shelf made to receive it. This movement rings a small bell and thus attracts the driver's attention, and the driver immediately takes up the coin and puts the proper packet of change in its place. The passenger opens his package, picks out a 5-cent piece (this is the coin commonly called a "nickel,") drops it into the box, and resumes his seat. Very often, the car is so crowded that it is impossible for a new comer (getting in behind, as all passengers do) to reach the other end, and in such cases the fare is passed on from hand to hand, and finally dropped into the box,

in the presence of the assembled passengers. Sometimes a passenger who cannot reach the driver wants change, but he passes on his coin, whatever it may be, in the same way, trusting the person sitting at the end to get the change of the driver, to open the package, drop in the fare, and return the balance through the hands of the intermediate passengers. The duty of rendering such help is universally recognised and cheerfully performed, nobody apparently considering that any obligation is incurred or conferred.

That no-one ever gets a free ride is, of course, more than I can assert. Meanness or poverty may be at times ingenious enough to elude the vigilance of the driver. But it is morally certain that the car companies save more by dispensing with a conductor than they are at all likely to lose by the dishonesty of the public. It is the rule for each passenger to drop his fare into the box soon after he enters the car, and if the payment is long delayed, the driver, who keeps his eye on each new comer, is pretty sure to notice the fact and to watch the defaulter with redoubled keenness. Sometimes, indeed, he will indicate, by a sharp tap on the box, that some passenger has forgotten his liability, and this induces the others to look round the car inquiringly, as much as to say, "Who's that meant for?" It is evident, too, that a person who resolves deliberately to have a free ride must be guilty of the mean act in the presence of a number of witnesses, perhaps a whole car-full, who would certainly notice if a new-comer showed no disposition to pay his fare. Between the vigilance of the driver and the pressure of public opinion and sentiment, the number of stolen rides is, therefore, I should say, exceedingly small.

As there is no conductor in these cars to signal the driver to stop when a passenger wishes to alight, the passengers are enabled to do their own signalling. A leather strap extends along the centre of the car near the roof, and within the reach of all. A sharp pull at any part of this strap rings a bell over the driver's head, and he stops either at once or as soon as his car is clear of the next crossing. Sometimes there is such a strap on each side of the car, with branch straps dependent from them, so that passengers may signal to the driver without rising from their seats. All this is very convenient, and renders locomotion extremely easy and pleasant. The street cars are, indeed, among the most admirable of American institutions. The fares are, as I have said, only five cents (2½d). Distance is not reckoned. Whether the passenger goes a quarter of a mile or several miles, the charge is the same, and in some of the large cities the traveller may have five or six miles of travelling for his five-halfpence. As the charges of the hackmen (drivers of cabs, &c.) are, on the other hand, incredibly exorbitant, almost everybody uses the street cars, and the business they do is consequently on the same scale as everything else American. The inhabitants of the cities appear to very seldom walk at all when they can ride, however short the distance they want to go. On inquiring the direction of places I wished to find, I was more than once told to take a particular horse car "for two or three blocks," and then to take another for about as far, the whole distance being, perhaps, half a mile.

I must add, in conclusion, that the popularity of the bob-tailed car sustained a severe blow a few days before I left New York on my return voyage. One of these cars was passing over the level crossing of a railway in a street at Philadelphia, when a train dashed into it, smashed it to splinters, and killed the greater number of the passengers (eight or ten, I think). It came out

in evidence that the driver was at that particular moment in the car, holding a dispute with a passenger about his fare, having left the "lines" (the reins) in the hands of a boy. The story of this terrible accident, told in the usual sensational fashion, evoked great sympathy and indignation throughout the country; and the newspapers, having first surpassed even themselves in piling up the agony, "went for" the bob-tailed car companies in fine style. These companies were denounced as greedy monopolists, who were sacrificing the lives of their customers for the sake of saving the expense of conductors and keeping up their dividends. The companies were told that the bob-tailed car "must go"—"go" being American for "abolished," "got rid of," "destroyed." Whether that conveyance has "gone" yet I cannot say, but I have discovered no evidence of its disappearance in any of the American newspapers which have reached me since my return.

I need hardly say that street cars ought to be driven over level railway crossings with the greatest possible care—that is to say, if they are driven over them at all. But the moral of the Philadelphia accident appeared to me from the first to be this—that the time has come for the abolition of all the level crossings which now render many of the leading thoroughfares in the great cities so exceedingly dangerous.

The bob-tailed cars, however, are not the only ones that have no conductors. I rode through Salt Lake City in a car which had neither conductor nor money-box, and the driver coolly left his two fine mules to trot on uncontrolled, while he struggled through the crowded vehicle to collect the fares. Nobody appeared surprised, so I presumed the driver was only following a practice which was common in the City of the Saints. Fortunately, we crossed no railroad on the level; and, the mules being serious and well-conducted beasts, which knew what was expected of them, we got through in safety.

A BACKWOODS CITY.

The scene now changes. I have hitherto dealt (so far as I have dealt with cities at all) with great, busy, populous, and prosperous places, of world-wide fame. I have now to speak of a city of a different type—a small, new city in the backwoods, where everything is still in the rough, and where the sturdy pioneers of civilization are still waging war with Nature. In referring to Cass City, the place in question, as a city, I am probably wrong; for, paradoxical as the statement may appear, Cass City is, I believe, not properly a city. The word "city," it is true, forms part of its name, but that argues nothing. There are in England plenty of hamlets and villages called Newtown, but it does not by any means follow that they are towns in any one of the senses in which we understand that word. As I understand the matter, Cass City is technically a village; that is to say, it is organized as such under the State or Federal laws. That it will be incorporated as a city in due time is pretty certain, and then its name will harmonize with the facts.

I spent a week at Cass City with some relatives who have long been resident in the State of Michigan, and my visit afforded me opportunities which I should not otherwise have enjoyed of seeing for myself what the pioneer work in a forest State is like. What I say about this little remote community, therefore, is not said because of the intrinsic importance of the place, but because Cass City is a type of thousands of other places which are struggling into existence on the borders, or in the midst, of the primeval forest.

The State of Michigan consists mainly of a large peninsula, in shape not unlike one of those thick leather gloves in which the four fingers are not separated. On the west of this peninsula is the vast area of Lake Michigan. On the east, the boundary also consists entirely of water—viz., Lake Huron, the Lake and River St. Clair, and the Detroit River. On the south, the State of Michigan borders on Indiana and Ohio. A large tract of territory lying between Lakes Superior and Michigan, and entirely detached from the principal part of the State, also belongs to Michigan, but of this I need not speak at present. The part I have to deal with now is (to return to my comparison) near the top of the thumb of the hedging glove. Between the thumb and the rest of the glove is Saginaw Bay, a part of Lake Huron, and near the head of this bay are the flourishing cities of Saginaw and Bay City, which are connected with Detroit by the Michigan Central Railroad. On leaving Detroit, I followed the main line towards Bay City for about 100 miles, to a place called Vassar, and then proceeded by a short branch to the right to the little town of Caro, the terminus in that direction at present.

THE FORESTS.

This railway journey was an exceedingly interesting one, for I found myself for the first time passing through long stretches of the virgin forest. The settlements along the line are numerous, and in a few cases present an appearance of importance and prosperity, but they are separated by tracts of dense wood in which the agriculturist has not yet set his foot. Many of the forest trees are, of course, very beautiful; but it must be admitted that the primeval forest is, on the whole, somewhat disappointing, as Oscar Wilde declared the Atlantic to be.

The Michigan forests appear to be greatly disfigured by swamps, and a swamp is never a cheerful spectacle. Good honest *terra firma* is a thing to be respected; so is a genuine lake or sea. But a compound of land and water, possessing none of the advantages of either and many of the drawbacks of both, is never likely to be a popular or much-admired mixture. And when the swamp is also a forest, it possesses some specially melancholy features, such, for instance, as noble trees lying around in all directions, rotting in the shallow, stagnant pools. Michigan, moreover, has suffered much from forest fires, and it is impossible to exaggerate the gloom and desolation which one of these terrible conflagrations leaves behind it. If the fire only made a clean sweep of everything, the disfigurement of the country would be far less. But this it does not do. It is, in fact, very capricious, its course and intensity being largely influenced by the nature of the wood it finds in its path and the varying force and direction of the wind. Now and then, it sweeps a small area tolerably bare; but, as a rule, it leaves behind it the trunks of all the larger trees, stripped as bare as scaffold-poles, perfectly black, and gaunt and hideous in the extreme. These blackened trunks are, of course, all dead, and in course of time they rot off and fall. In this state, they furnish excellent fuel for another conflagration, which sometimes happens. Even where neither swamps nor fires disfigure the forest, other causes are often at work to mar its beauty. In more than one place, I saw the track of one of those terrible cyclones to which some of the States are liable. A narrow lane had been cut through the forest, the clearance being as complete and well-defined as if a party of wood-

cutters had been sent to clear the track for a railroad. The trees all lay with their heads pointing in the same direction, and all were in various stages of decay. But even in the absence of hurricanes, natural decay is, of course, ever doing its work on individual trees. In due time, they fall, or rather try to fall; for the forest is generally too dense to allow them to lie down at full length to die, and they accordingly lean against each other at all sorts of angles until they fall to pieces or pull each other down. But, in spite of all these drawbacks and disfigurements, it is impossible to travel a hundred miles through such a State as Michigan without passing through stretches of woodland whose dense foliage, rich colouring, and unbroken solitude constitute charms for all for whom Nature has any charms at all. No visitor to America should fail to see some real virgin forest, even if he has to go a good way from the beaten track to find it.

CARO AND ITS NEWSPAPERS.

I left the railway at Caro, a thriving town of some 2,000 people, consisting mainly of one wide street, the roadway of which appeared to be "repaired" with loose sand. A Cass City friend met me at Caro Station, and drove me in his buggy to his home, 16 miles distant. Before we left Caro, he took me to two newspaper offices in the town and introduced me to the editors of both. My visit was duly chronicled in the next issue of each paper. If such trifling events were not thus recorded, it is difficult to see what two newspapers in a town of 2,000 people would find to say. For papers of that class are seldom seen outside the immediate neighbourhood of the place of issue. As a matter of fact, they chronicle much "smaller beer" than we local journalists in England do; and that, in view of our cricket matches, "tea-fights," and club dinners, is saying a good deal. In many small local papers, the arrival and departure of almost every person who enters or leaves the town are reported.

"Esau Jones returned home from Chicago Friday."

"Miss Smith is on a visit to friends in Ohio."

This is the sort of thing which the American papers supply by the column. In one paper, indeed, I saw it reported that Mrs. So-and-so had engaged a new "help" (servant girl). It is only necessary that the editors should announce when the cats produce kittens to render their journals complete records of local events.

BACKWOODS ROADS.

The road from Caro to Cass City (16 miles) is simply a broad strip fenced off from the adjacent fields, and consisting of precisely the same sort of material as they. The soil is certainly thrown up slightly in the middle of the track, and it has in some parts a rudimentary ditch on each side. But, so far as I could discover, not a particle of stone had ever been laid on it. There are certain regulations for keeping the roads in repair, but the repairing appears to consist simply in filling up the holes with black surface soil and restoring more or less perfectly the shape of the track. The road in question had not even been repaired to this extent. It abounded in boggy places, deep dry holes, and other pitfalls, which to a novice in backwoods travelling were somewhat alarming. When I remarked on the state of the road, the reply was, "You should see it in the winter!" from which I inferred that it was regarded as in a decent state of repair. As a matter of fact, few accidents appear to happen. Both the drivers and the horses know by instinct how to "take" the specially bad places, and the four high wheels of the buggy, the

most popular American vehicle (of which more some day), are specially adapted to getting over deep holes. These wheels are very light and spider-like; but, being of hickory, they are very tough, and will stand a vast deal of shaking and twisting. Even if a spill occurs, the spindles are certain to be able to select a soft place to fall upon; possibly, indeed, no hard place may be within sight. A person who had been accustomed to our fine English roads would, no doubt, find it hard to get used to these unstoned tracks; but those who have never seen better thoroughfares appear to be tolerably content with them. Stoned roads in the newly-settled and thinly-peopled districts are, of course, out of the question. Stone is sometimes not to be had within any reasonable distance; and even where it is to be had, the scattered population would find the cost of constructing stoned roads well-nigh ruinous. As the country fills up, and a demand for better locomotion arises, the roads are sure to be gradually improved. They are, however, of less importance than they otherwise would be owing to the fact that almost every town and village is on or near a railway. Cass City, with its 600 or 700 people, had no station within 16 miles when I was there; but since my visit a railroad has been opened which passes through it, connecting it on one hand with the coast of Lake Huron, and on the other with Pontiac, Detroit, Toledo, and the rest of the civilized world. The road to Caro is consequently of little importance now.

HOW A CITY IS LAID OUT.

Cass is a name which turns up in many of the States. Cass County, Cass River, Cass City, or Cass Avenue is with the traveller everywhere. Cass was an American General whom his countrymen thus delight to honour. Cass City, Michigan, is so called from the River Cass, a small stream, made up of two smaller ones which unite near the "city." This place is in embryo as yet, but its inhabitants believe that it has a great future before it. No doubt it has. It is, at any rate, safer to bet that way than the other.

A description of the way in which one city is laid out will apply to almost every new American town. The plan of the streets is apparently decided on when there are very few, if any, buildings in the place. I need hardly say that that plan is usually of the chess-board kind. So many wide, parallel, and equi-distant roads are marked out in one direction, and an equal number, exactly similar, are marked out across them at right angles. The site is thus divided into square or oblong blocks, each block abutting on four separate roads. The roads are forthwith dedicated to the public use, and are very often planted at once with shade trees on both sides. The beginning is thus very regular and systematic, but the next stage of the city's growth is most irregular and unsystematic. For the place does not begin with a solid nucleus and grow outward, filling up as it goes. It may, perhaps, have been laid out on a magnificent scale, like Salt Lake City, with streets enough for a population of 100,000; and for many years the vast site may be occupied by only a few hundreds. The result is a scattered, scraggy, unfinished look. Mr. A., a new-comer, fancies the corner of a block which is, so far, entirely unoccupied. He buys it and runs up his frame house; and possibly, if the progress of the town is slow, he may be the only settler on the whole of that block for the next 10 years. All the land in the block except his own may be a wilderness all that time,

serving no purpose but to provide a little coarse herbage for the town's people's cows, which are regularly turned into the streets after the morning milking to provide for themselves. The next settler prefers a position in another part of the town, and he, perhaps, is equally isolated for years. So the houses are one by one dotted about the vast site of the infant city—one here, the next there, and the third over yonder—without the slightest order or system; the only thing fixed and settled being the width, the direction, and the position of the streets.

This irregular growth has some advantages, of course. There are ample elbow-room and plenty of fresh air. But, on the other hand, no organised system of water supply, gas-lighting, paving, or drainage can be adopted, except at a cost altogether out of proportion to the number of the inhabitants. The result is that many of these very scattered communities have to do without the commonest conveniences of civilized city life, even when their populations have attained considerable proportions. I was told, for instance, that Salt Lake City, with its 25,000 people, does not yet possess a single sewer. The mileage of its streets is so great in proportion to its population that the proper sewerage of the whole would cost a prodigious sum.

But let me descend from the general to the particular. The description I have tried to give of the usual mode of development in American towns applies with sufficient accuracy to Cass City. The area laid out there is not very large, but only a small part of it is as yet occupied. In only one of the streets is there anything like continuous building on both sides. On the other streets (Americans always say "on" in this connection) the houses and other buildings have been dropped down at random here and there. Most of the buildings, even in the main street, are of wood; but the exceptions, though few, are increasing. Those who regard the utmost extreme of irregularity as the chief element of the picturesque would be bound to admit that Cass City possesses that element at least; for the buildings abutting on the main street range from the modern and substantial brick store, bank, or public assembly-room, down through all gradations to the flimsiest and most dingy of one-storey shanties, which a respectable gale would blow away bodily. And it must not be supposed that the character of the erection always indicates the nature of the business attached to it, for I discovered that one of the most rickety-looking of all the wooden sheds was the office of a respectable and flourishing firm of lawyers—the only one, I believe, in the place. By the way, I had a long chat with the two gentlemen constituting this firm, and it may interest English capitalists who are tired of three or four per cent. to hear what they told me—viz., that eight per cent. may be made in that part of Michigan on the security of real estate of the best class, with ample margin. A great deal is lent at ten per cent., where the security is not quite so complete.

The main street also contains "stores" (shops) representing almost every branch of retail trade. Some of them are very large, and their contents as miscellaneous as those of a "general shop" in an English village. The proprietors of the principal stores are known as "merchants," and in some instances they carry on a large business, partaking of the nature of barter, with the neighbouring farmers, taking from the latter their corn, wool, and other produce, and supplying them in return with almost all the necessaries of life which are not actually produced on the farms.

The principal merchant in Cass City has a steam flour mill in the main street, the boiler being adapted to the burning of wood, as most boilers are in the forest districts.

I need hardly say that Cass City has its weekly newspaper, appropriately called the *Enterprise*. He must indeed have been an enterprising man who started a weekly in such a place two or three years ago. But, as the present proprietor explained to me, those who thus establish journals in outlandish villages are simply discounting the future. Judging from the progress of almost every place around them, they are satisfied that the village of their choice will one day be a town of some importance, and that it is sure, sooner or later, to be able to support a newspaper. Their aim is to be the first in the field, to secure a footing and to establish a claim on public support while the place is as yet in its infancy. It must not be forgotten, moreover, that even small places like Cass City are centres of agricultural districts comprising many farms, whose occupants take the local paper and occasionally advertise in its columns. It is a fact, too, that, as readers, a thousand persons in Michigan count for more than a thousand in the rural parts of Somerset or Dorset. They count for more, also, as general purchasers, for on the average they are far better off than the country people of the West of England. The establishment of a newspaper in a village of 500 or 600 people is not, therefore, quite so mad a "spec." as an English journalist may suppose.

THE RIGHT SORT OF SETTLERS.

Many of the best and most successful settlers in and around Cass City are men who had first emigrated to Canada, and had presently crossed the boundary line into the territory of Uncle Sam. Some of these men are from Ulster, and are, therefore, Scotch by descent; and a race better fitted for the hard pioneer work of the backwoods it would be difficult to conceive. They are the very embodiment of physical endurance, unflagging industry, and dogged perseverance; and if, at any time of their lives, they needed the operation of steady- ing and sobering influences, they have most certainly discovered what they wanted in their daily warfare with the obstacles which Nature had placed in their chosen path. If any young man feels that he wants sobering down, wants to be made to take a more serious view of life than he has yet taken—wants (to borrow a good strong metaphor) "the Devil taken out of him"—I recommend him to go and build himself a log hut in the backwoods and begin a single-handed struggle with the forest.

I had always been told that the pioneers of agriculture in the forest States were remarkable men; but since my visit to the Michigan backwoods has enabled me fully to realise the nature of their work, I have conceived for them a respect such as I pay to few other classes. There must be "real grit" (as an American would himself say) in men and women who can stand to their posts in the van of progress as these early backwoods farmers have done. The privations they endure in the early days of their settlement are painful to reflect on. And this is particularly the case when they are people of some little education and refinement. The absence of comforts and conveniences which men and women of a coarser order would hardly notice must constitute a terrible trial to such. I visited one farm in the neighbourhood of Cass City, which a family of this superior class had literally created amid the "forest primeval." But from the strange zigzag timber fences which separ-

ated the fields—a kind of fencing which is universal in all the wooded States—it would have been possible, in walking over this farm, to imagine one's self as being in one of our best cultivated English counties. Patches of wood had been judiciously preserved here and there, possibly for the supply of fuel; but they were as ornamental as they were useful. They formed suitable backgrounds to the gently-sloping and carefully-tilled fields, just as the copses do in Hampshire and other parts of England. The farmer's wife, a lady of considerable education and taste, described to me the battle which she and her husband had fought before attaining their present position of comparative affluence. She showed me their three successive residences—first, the rude log cabin, of a single room, which they at first built in the midst of the forest; secondly, an enlarged and improved edition of the same sort of dwelling; and, lastly, No. 3, the handsome, comfortable, and well-furnished house in which they now live. I asked the lady what No. 4 would be like, but she assured me that she and her husband had now reached the height of their ambition as far as their residence was concerned, and that they should probably stick to No. 3 to the end of the chapter. This sturdy and indomitable pair had had a number of children—all, or nearly all, boys—and I believe I understood her to say that, during the whole of the time of their growing-up, she did all the household work herself, without any regular help. But the boys, when old enough to assist on the farm, were invaluable, and much of their father's later success was due to their steady aid. Their education was not, however, forgotten, and some of them were, at a recent date, still studying at the State University during the winter, when their help was not required at home. I suppose I need hardly say that this farmer had no landlord but himself. He bought the land at a nominal price when it formed part of the forest, and the large addition which has been made to its value has been entirely due to the industry and perseverance of himself and family, who, properly enough, reap the whole of the fruits of their labour. A farm improved to the pitch to which he has brought his is a very valuable property, even in a State where land can still be bought for a few shillings an acre.

GETTING RID OF THE "WEEDS."

It is difficult for an Englishman to realise a state of things in which fine growing timber is regarded as a nuisance, to be got rid of by any means. Such, however, is the case in those parts of Michigan which have no suitable rivers to convey the timber to the coast. The first business of the settler is to uproot and destroy the gigantic "weeds" which encumber his newly-acquired estate. The most obvious method is to set the forest on fire at a dry season of the year; but a fire, when once set going, has an ugly knack of refusing to stop, and of burning things which nobody wishes to destroy. There are, I believe, State laws against firing the forests; but it is generally impossible to say whether a fire has been started by accident or by design, and there is reason to believe that it is often done intentionally. As we shall see presently, these fires sometimes attain most alarming proportions, and assume the character of great and awe-inspiring calamities. Supposing the settler decides to get rid of his "weeds" without firing them, he has first to fell the timber, and clear away all that he does not immediately require for his buildings and fences. The stumps are, of course, still left and

these form a very curious feature in the landscape in many parts of the country. Sometimes the farmers manage to carry on operations amid the stumps for years; but it is obvious that this is a very difficult, slovenly, and wasteful sort of husbandry, and no good farmer will continue it an hour longer than is absolutely necessary. There are various modes of getting rid of the stumps and roots. Digging them out is necessarily a slow and expensive process. Allowing them to rot is a still slower business, and even more costly, if the loss sustained through imperfect husbandry and diminished area be taken into account. Attempts to burn the stumps out are frequently made, as the appearance of many fields testifies. But the best way to get rid of them is, as in the case of decayed teeth, to pull them out bodily. And American ingenuity has placed the means of doing even this within the reach of the farmer. The "root-extractor" is a powerful machine which, by means of a combination of levers, tears up the largest stumps, roots and all. A field which has just been operated on by one of these machines presents a remarkable sight. It looks as if an earthquake had recently paid it a visit, or as if Chaos had come again. The roots, of all shapes and sizes, are scattered about in wild confusion. In many cases, they refused to yield to the persuasions of the "extractor" without bringing up in their embraces great masses of their mother earth, and the field is thus converted into a series of rugged pits. The work of removing the roots and levelling the soil is no small matter; but, that once done, the farmer has for the first time a clear field for the operation of his numerous labour-saving implements, and he soon recoups himself the cost of the operation.

FOREST FIRES.

I have already referred to the subject of forest fires, which has a painful interest for Cass City. In the autumn of 1881, the Michigan woods took fire, or were purposely ignited, in several different places; and, the season being a dry one, the fires assumed gigantic proportions. Cass City, among other places, was threatened with complete destruction. The fire did, indeed, reach some of the straggling houses in the outskirts of the town, and nothing but a change of wind at the most critical moment saved the place. The inhabitants prepared for the worst. They conveyed their valuables and every other moveable article of property to the largest open space they could find, and there awaited the result with fear and trembling. The danger did not arise from actual contact between the forests and the houses. As a matter of fact, the belt of cleared land round the town was of considerable width. But everything was inflammable, and the fire crept up from the burning woods, through the grass and stubble and along the fences, to the very doors of the inhabitants. The air was laden with suffocating smoke; the roar of the flames and the crash of falling trees drowned all other sounds. Terrible stories are told of the bodily and mental suffering to which many of the inhabitants of scattered houses were subjected for hours. Some saved themselves and their children by descending into wells and remaining there till the tornado of fire had swept past. A poor woman whose house was near the River Cass, unable longer to find a safe standing-place on land, walked into the stream with her child in her arms, and waded up or down the river towards a place of safety. She was in the water several hours. The heat from the blazing timber on the banks was so intense that she was obliged occasionally to cool her

head by plunging it below the surface, and at last the water became so warm that she began to fear she had only escaped roasting to be gradually scalded to death. She was, happily, saved, but in a state of temporary blindness from the effects of the heat and smoke. It is curious to notice how great natural catastrophes of this kind appear to unbinge the minds of all but the strongest. I was told at Cass City that many who are certainly not ordinarily superstitious were disposed to regard these great fires as in some undefined sense supernatural both in origin and character. The whole thing was so awful and awe-inspiring, so vastly transcending all previous experiences, that men and women (women especially, I imagine) found it impossible to regard it as part of the natural order of things. I have heard that the great fire at Chicago produced somewhat similar effects on a certain class of minds. I was at Colchester early in May, a few days after the neighbourhood of the town had sustained the severest earthquake shock felt in England for three centuries, and I found that that terrible phenomenon had had a similar unbinging and demoralising effect on the minds of the people there. Their mental constitutions, as well as their houses, had apparently sustained a rude shock, and seemed incapable of readily recovering their equilibrium.

CHURCHES AND MINISTERS.

America has as many religious sects as England, and even a small community like that of Cass City cannot get on without three or four separate churches. The various bodies appear to be on very friendly terms with each other—a circumstance which is, perhaps, partly due to the absence of a state church; and they support among them a number of organizations of a philanthropic kind. Ministers in the backwoods appear to keep their pride in their pocket, if they have any pride. I was entertained at Cass City in a family which comprised a cow. A young minister who was supplying the pulpit at the Presbyterian Church was lodging in the same house; and on one occasion, when my respected relative, the head of the family, happened to be going out about milking time, he asked the reverend gentleman to oblige him by doing the needful for the cow. The young man cheerfully assented, as if as a matter of course, and on another occasion he "hitched up" the horse when the buggy happened to be wanted during my host's absence.

COWS IN THE STREETS.

Talking of the cow reminds me of what I recently said about the turning of the cows into the streets. This, as a matter of fact, appears to be the rule in most unfinished towns like Cass City. The cows are milked in the early morning, and then turned loose to take care of themselves during the day. Apparently, they seldom stray far, and are found without much difficulty when the evening milking-time arrives. The unoccupied ground and the sides of the wide roads produce so much grass that the animals appear to find all the food they require. But they do not confine their operations to the open parts of the town. On more than one occasion, I saw a number of them, collected, I presume, for social intercourse, coolly dawdling about in the main street.

AMERICAN "STAGES."

Cass City has, since I was there, been brought into direct railway and telegraphic communication with the rest of the world. A year ago, it had no telegraph, and the mails were carried to and fro between it and Caro

on a vehicle called a "stage." It must not be supposed that an American "stage" is necessarily any relation to the swift and well-appointed vehicles which in this country were elbowed out of the way by the railways. The Cass City stage, which conveyed mails, passengers, and baggage alike, was a rough sort of wagon, with a very shallow body, not unlike what an English "trolley" would be if it had a raised rim all round, converting it into a sort of huge tray. Across this tray were two or three wooden seats: and on these perches, unprotected from the weather, the passengers were jolted over the 16 miles of road between Caro and Cass City. I saw vehicles of this kind standing at many of the country railroad stations, and I could not help being struck with their unnecessarily comfortless appearance. The Americans have some mysterious objection to make the bodies of their vehicles *deep*, so as to afford protection to goods and passengers' legs. A shallow tray is the universal type of carriage, and comfort and safety are everywhere sacrificed to it. It is a rare thing to see a carriage of any sort with sides more than a few inches deep.

SCHOOLS.

The national system of education, which is the pride and the true glory of America, appears to be extended to new communities as fast as they come into existence. Cass City already has its public schools, to which all classes of children have the right of access, free of charge. The principal schools are in the town, where the superintendent teacher lives and works; but smaller buildings are provided in the outlying districts for those whose residences are more than a certain distance from the town schools. I visited one of these outlying schools, and found the children playing outside during a short recess. They did not own a boot or a stocking among them; and, had I not been cautioned in advance, I might have been disposed to regard them as pauper children. That, however, would have been a great mistake. The scholars were in reality almost all the sons and daughters of farmers, and in leaving their foot gear at home they were merely complying with a custom which is well-nigh universal among children, during the summer, in many rural districts where the roads are innocent of stone.

STOVES.

The use of the stove for heating purposes is universal in the northern States; and wood is, of course, the only fuel in the forest districts, where it is a drug in the market, if not a nuisance to be got rid of. The stove has been brought to a high state of perfection. In its most highly-developed form, it is a lofty and imposing structure, elaborately ornamented and proportionately costly. Those whose ideas of the American stove are founded entirely on what they see in the shops of English ironmongers, have no conception of the fine specimens which are to be found in the best rooms of the houses of well-to-do Americans. These, including their elaborate top ornaments, are often nearly as tall as an average man, and are resplendent with polished metal, handsome castings, and little windows of some semi-transparent, indestructible mineral substance. Through these windows the light of the enclosed fire is visible, and the want of "cheerfulness" for which closed stoves are disliked in this country is thus partially obviated. It is customary in very severe winters to keep the fires going night and day, and in many houses the heat is admitted into the bedrooms through grated openings in the ceilings of the lower rooms. These grat-

ings are covered when not needed for the purpose for which they were designed.

I AM CROSS-EXAMINED.

I shall not soon forget the kindness and courtesy of the people of Cass City, a good many of whom I came in contact with. I partook of the abounding hospitality of several of them, and learnt from them a great deal that was very interesting as to the progress of the place, and the kind of life which the pioneers of all such communities have to live. But my curiosity on these subjects was at least equalled by that of the Cass City people with regard to this country and my impressions of America. Their interest in England was intense. On one occasion, the principal public school teacher and one or two others cross-examined me for about two hours straight ahead, the subjects of examination comprising our form of Government, the relations between Queen, Lords, and Commons, the position of political parties, the size and appearance of London and our other great cities, the English railways, our education system, the British press, and (profoundest mystery of all to my inquisitors) our various orders of nobility. I tried hard to make it clear to them in what respect an earl stands higher than a baron and a duke or a marquis above both; why "honourable" means one thing and "right honourable" another thing, and why a person may possibly have a claim to both titles; why a peer is always a lord while a lord is not always a peer; and so on through all the refinements of the upper strata of our social system. Some things I flatter myself I made tolerably plain to them, but I fear I left them hopelessly bemuddled over these questions of rank and title. The American mind is not adapted, either naturally or by training, to comprehend these profound and awful mysteries, and I sometimes doubt my own power to understand either them or the deep interest with which they are regarded. My cross-examiners at last apologized for having so far "tried my patience," as they put it; but the truth is, it was impossible to be annoyed at their inquisitiveness, for it was evidently the outcome of a very profound interest in the affairs of a country which they are proud to be associated with by race, descent, and history, even while they pride themselves (very properly) on being independent of it and of all other European States. If the people of Cass City fairly represent American sentiment towards this country, as, judging from my after experience, I believe they do, there is small fear of any serious or permanent estrangement between the two great branches of the English-speaking race.

In the course of the long conversation which I have tried to describe, the question of American pronunciation turned up, and a lady of the party embarrassed me a good deal for a moment by saying:

"You must have discovered, sir, that we talk very bad English!"

Now, what *could* one say to this, the speaker being a lady? There was a rather awkward pause, but it at last occurred to me to remark, I am afraid with some little economy of truth:—

"Not at all, madam! What I do remark is that I talk very bad American!"

HOW CITIES ARE CHRISTENED.

But I must bid farewell to Cass City, for other (and larger) fish are waiting to be fried. A city of another sort—the mighty and wonderful Chicago—demands my

attention, and I will accordingly wind up this chapter with a curious example of American nomenclature. Cass City is in Tuscola County. The next county northward is Huron, and the county seat or county town of Huron bears the remarkable name of Bad Axe. The Americans say that, when they want a name for a new place, they do not sit up all night and cudgel their brains to invent one. They seize on the first homely word that occurs to them, and the christening is forthwith done. This was no doubt the case at Bad Axe. Some early settler had probably reason to complain of the quality of the tool with which he was engaged in felling his timber. Perhaps he bestowed a little superfluous strong language on the axe and threw it away, and when a log hut or two were built on that spot, Bad Axe suggested itself as an appropriate name. Anyhow, there stands the town, and my explanation of its name is the best that occurs to me. I may add, in conclusion, that an antidote to Bad Axe has been thoughtfully provided by another party of settlers; for a short distance off, on the shore of Lake Huron, stands Grindstone City—if my map of Michigan tells the truth.

CHICAGO THE WONDERFUL.

If one is asked where the characteristic energy and enterprise of the American people have found their fullest expression and their greatest material rewards, where the growth of population and of wealth, great everywhere, has attained its most amazing proportions, the reply is ready. Only one answer is possible, and that is "Chicago!" Other American cities—many of them—have grown in population and wealth at a prodigious rate; but this monster community which has sprung into existence at the head of Lake Michigan, and become what it is within the recollection of men now living, has probably outstripped, in its fabulously rapid progress, all other cities, whether of ancient or of modern times, whether of the Old World or of the New.

While I was in America, some eminent politician was reported to have said, in the course of a public address: "We are going to have three Londons on this continent—one on the Atlantic seaboard, a second on the great lakes, and a third on the Pacific coast." This prediction is in a better way of being fulfilled than a great many prophecies that are uttered. The speaker, of course, referred to New York, Chicago, and San Francisco; and it really looks as if these three cities were not unlikely to rank with our own metropolis before the next century has reached middle age.

A FINE SITE.

The site of Chicago is clearly indicated by Nature as that of a great commercial city. Water carriage is the cheapest of all forms of locomotion. The staple products of the Western States are food, in the shape of meat and grain. These articles are bulky and heavy in proportion to their money value, and it is, therefore, necessary to convey them to the coast, for shipment to hungry Europe, at the smallest possible cost. Now, as I have more than once explained, the Great Lakes, the River St. Lawrence, and the artificial canals connected with them, constitute a splendid system of internal navigation, extending up from the ocean into the very heart of the corn-growing and meat-producing States. The heads of this system of navigation (for there are two) are at the western extremity of Lake Superior and at the southern end of Lake Michigan. From these two points, produce can be shipped to the Atlantic sea-

board, or, if placed in sea-going vessels adapted to the canals, to Europe direct. Those two points, therefore, are naturally indicated as the sites (or, as an American would say, the "locations") of ports for collecting the produce from the neighbouring States, and starting it on its journey by water towards our stomachs. At the head of Lake Superior, which has only recently secured communication with the West by means of the Northern Pacific Railroad, two rival towns are growing up—Duluth and Superior City. Of these I shall have occasion to say something presently. My business at present is with Chicago, which has already grown up near the head of Lake Michigan—that is to say, near its southern extremity.

A glance at a recent railway map of the States will make the position clear. In front of the city lies the vast expanse of the lake, forming the first link in the great watery chain which connects Chicago with New York and the Canadian ports. This is, to use a homely figure, the city's front door. But behold its many back doors! Like the spokes of a wheel, the great trunk railroads radiate from the mighty centre towards every point of the compass, except in the direction of the lake. No less than fourteen of these trunk lines centre in Chicago. These railroads, with their numberless offshoots, constituting a perfect net-work, tap every part of the immense district of which Chicago is the commercial metropolis. Not only are the older and more settled States of Illinois, Wisconsin, Iowa, Indiana, Missouri, and Michigan thus bound to the city by iron ties; but the enterprising citizens have stretched out their long arms so as to embrace the more distant and more partially-settled States and Territories of Minnesota, Dakota, and Nebraska. Towards the great centre of attraction on the shores of Lake Michigan the produce of these vast regions—their horned cattle and hogs, their timber, their wheat and maize—is ever moving, in numbers and quantities well-nigh inconceivable. Coming in by rail from the west, the north, and the south, this produce is either temporarily stored in Chicago or at once pushed on eastward, according to the state of the markets. It does not follow, however, because there is a watery highway to the coast, that all these millions of tons are necessarily sent eastward by that route. As a matter of fact, immense quantities of it complete their journey to the coast by rail; but I need hardly inform those who know the effect of sea and canal competition upon railway charges that the eastern railroad companies are compelled to accept the same rates as the shipowners on the lakes. Sometimes, indeed, when the different railroads are engaged in one of their insane fights for traffic, the charges go down to a point which is unremunerative, whether on land or on water. It is, however, obvious that the Chicago merchants reap the full benefit of cheap water carriage eastwards, whether they forward their goods by ship or by rail. Except when the canals are obstructed by frosts, the rates can never rise above the point at which the shipowners are prepared to carry freight.

The same causes that conspired to make Chicago a great collecting centre have tended to make it a great distributing centre also. The splendid system of railroads which is so perfectly adapted to the bringing-in of agricultural produce is equally well-fitted for the carrying-out of the thousand and one necessities and luxuries of life to the prosperous and growing population of the vast contributory district. Chicago is not, therefore, a mere collection of cattle pens and grain

elevators, though it possesses these things on the largest scale. It is, besides, a huge mart of miscellaneous trades and manufactures as varied as those of London. While it relieves the Illinois or Wisconsin farmer of his superfluous hogs and "corn," it stands prepared to supply him, in return, with the newest thing in drills, reapers, or wire fencing, to clothe his wife in fur or silk, and to make jewellery (sham or real) or build a piano for his daughter. Boston men are said to boast that "what Boston don't know ain't worth knowing;" and Chicago men might, with at least equal truth, declare that "what Chicago can't supply ain't worth having." It would, at any rate, be difficult to mention a branch of trade which is not represented in this great emporium of the West.

A FELLOW-TOWNSMAN TURNS UP AT THE NICK OF TIME.

I travelled from Detroit to Chicago (285 miles) in a sleeping car during Saturday night, reaching the Palmer House, in the latter city, early on Sunday morning. There I found my travelling companion awaiting me, as per agreement made when we parted at Niagara 10 days before. I had been obliged to leave my trunk—the memorable trunk which the baggage-smashers afterwards served so badly—behind at Cass City, and it followed me on to Chicago, *via* Detroit, in a rather irregular fashion and without being checked. I had, therefore, no check to show at the Chicago depot, wherewith to establish my claim. The man in charge of the baggage room (very properly, no doubt) refused to let me have the trunk. I must, he said, be properly identified as the real owner, and he referred me to his superior, the chief baggage agent, whose office was in a distant part of the station. To this official I explained the situation and handed my card. He looked at the pasteboard rather curiously and then at me, and said in an astonished tone,

"What are you from Yeovil?"

"Certainly!" I replied.

"So am I," he said. "Don't you know Mr. —, the bootmaker?"

"Of course I do."

"Well, he's my uncle; and Henry C——, who has a shop at M——, is my brother."

"Then you are the very man I want," said I; "for I was told I must be identified, and you are evidently stationed here for the very purpose. I presume I can now have my trunk."

"Why, certainly," he replied. He then proceeded to remark on the curious coincidence that had brought us together just when his personal knowledge was needed. He said he had been at that station for some years, and, although he had met with many Englishmen, he had never before seen a person from Somersetshire, much less from Yeovil. It was, we agreed, very remarkable that the first person he ever met there from his own neighbourhood should have to appeal to him in his official capacity for the release of baggage, and in his personal capacity for that identification without which the release could not be granted. I only hope that the next man to whom I have to appeal, in a similar fix and in another hemisphere, will also prove to be a Yeovilian. There is no law against *hoping* this, but I suppose I can hardly *expect* such a coincidence to occur again, even if I live another century and have to establish my claim to baggage every day.

HISTORY IN BRIEF.

The first white visitors to the site of Chicago were Joliet and Marquette, who arrived in August, 1673.

The first permanent settlement was made in 1804, during which year Fort Dearborn was built by the U. S. Government. The fort stood near the head of Michigan Ave., below its intersection with Lake St. It was abandoned in 1812, re-built in 1816, and finally demolished in 1856. At the close of 1830, Chicago contained 12 houses and three "country" residences in Madison Street, with a population (composed of whites, half-breeds, and blacks) of about 100. The town was organised in 1833, and incorporated as a city in 1837. The first frame building was erected in 1832, and the first brick house in 1833. The first vessel entered the harbour June 11, 1834; and at the first official census, taken July 1, 1837, the entire population was found to be 4,170. In 1850, the population had increased to 29,963; in 1860, to 112,172; and in 1870, to 298,977. According to the United States Census of 1880, the population was then 503,304. "It is claimed" (to use an Americanism) that the population is now over 600,000. Chicago is, therefore, more populous than any city in the United Kingdom except London; for Glasgow, Liverpool, and Manchester (with Salford) are all still under 600,000. As the population was barely 30,000 in 1850, it has multiplied twenty-fold in the ... period of 34 years. If Brooklyn be regarded as a part of New York (and it is really as much that as Southwark is a part of London), Chicago is now, in population, the third city in the States. The first is, of course, New York; the second is Philadelphia, which contains nearly a million. These figures and comparisons will enable the reader to realise the marvellous rate at which people have, during the last generation, been flocking from every part of the civilized world to the grand centre of attraction where the Illinois prairie slopes down to the shore of Lake Michigan. And it must be borne in mind that the increase of over 200,000 attained between 1870 and 1880 was achieved in spite of the greatest calamity which has befallen any large city in modern times, the Lisbon earthquake alone excepted. I refer, of course, to the great fire which, in October, 1871, burnt out the heart of the city, and of which I shall give a few particulars presently.

I happened to be in Chicago during the very week when the citizens were celebrating the fiftieth anniversary of the organization of the place as a town. This took place, as I have said, in 1833, and the newspapers of last August stated that at the first election of town officers the number of voters was under a hundred. It is difficult for a middle-aged man who has seen the city to realise the fact that it is no older than himself. The accumulation of people, of buildings, and of wealth is so vast, the organization of society and of commerce so complete, that the place appears more like the growth of a century or two than of a single generation. And let no-one suppose that this growth is necessarily of the mushroom kind—too rapid to be solid and permanent. It would be absurd to assert that there is no unhealthy business, no unsound speculation, in a huge city which has thus sprung up, as it were, in a night. There is plenty of both, as there is sure to be anywhere under similar circumstances. But it is certain that the mass of the business of Chicago is sound, legitimate, and highly profitable, and that the prosperity of the city is likely to be permanent—as long, at any rate, as the fertility of the western and north-western States is maintained. The city is no Jonah's gourd. It has, no doubt, sprung up as if by magic, but it does not by any means follow that it is going to wither in a single morning.

POSITION AND DRAINAGE.

Chicago is, as I have said, on the western shore of Lake Michigan, near its southern extremity. It therefore looks eastward across the lake, which in appearance is precisely like the sea, the opposite shore being always out of sight. The Chicago shore, of course, runs north and south, or thereabout. The lake frontage of the city is ten miles in length, but this is not, as yet, all compactly built up. Three of the parks occupy a considerable part of the frontage, and at the northern and southern extremities the buildings are still somewhat scattered, although the streets are all laid out. Inland (that is, in a westerly direction) the city extends four or five miles. The prairie on which Chicago stands was formerly almost on a level with the lake, but the site and the buildings have been gradually raised, at immense cost, to the extent of from three to nine feet. The average height above the water is now 14 feet, the highest part being as much as 28 feet. A sufficient fall has thus been obtained for drainage purposes.

Speaking of drainage reminds me of a remarkable discovery I have just made with respect to the disposal of the sewage of Chicago. When writing some months ago about the St. Lawrence at Quebec, I indulged in a little soliloquy (nice subject for a soliloquy!) about the mass of sewage which I supposed the river was bringing down from the great cities on the lakes, Chicago being, of course, among the number. Now, mark how dangerous a thing it is to take things for granted, however obvious they may appear to be! I assumed, because Chicago was on the shore of a great lake, that all its sewage naturally flowed into that lake. Nothing could, apparently, be more reasonable; but, as a matter of fact, nothing could be more erroneous. The greater part of the sewage of Chicago does not flow into Lake Michigan, *but into the Mississippi River, and so into the Gulf of Mexico.* Those who have a map of the States before them or in their mind's eye will probably refuse to believe this. They will say, very truthfully, "You may as well tell us that the sewage of London does not run into the Thames, but into the Mersey or the Bristol Channel!" The comparison is a fair one, but what I have said about the drainage of Chicago is, nevertheless, correct. The facts are these:—

Chicago takes its name from a small creek called the Chicago River, which used to flow into Lake Michigan, but now flows out of it. "Another geographical paradox!" somebody says. Just so! But hear me out. About a mile from the point where the creek joins the lake, it divides into two branches, one running north-west, and the other south for two miles and then south-west. This creek and its branches, together with numerous artificial canals connected with them, afford a water frontage of 38 miles. The river has been dredged and otherwise improved until deep enough to admit vessels of considerable tonnage, and by means of it and its branches such vessels, or large barges, are brought alongside the factories, elevators, stock-yards, and timber wharves where the staple trades of the city are mostly carried on. From the southern branch of the creek, a canal for the purposes of navigation was made many years ago to the Illinois River at La Salle; and as the Illinois is a branch of the Mississippi, Chicago was thus placed in communication by water with all parts of that great river and its tributaries. At first, this canal was cut off from the lake by a lock, and the water both of the canal and of the Chicago River be-

came stagnant and offensive. At last, it occurred to the citizens of this smart city that it would be a good idea to make the current in both flow towards the Illinois River. The engineers discovered that the scheme was possible; for, though the ground rises gently from the lake-side for a few miles, it soon begins to descend gradually towards the valley of the Mississippi. The work of widening and lowering the bed of the canal was accordingly undertaken, and a wonderful and costly work it was, occupying fully three years. But the results justified the outlay. A current from the lake into the canal was established, and has continued to flow ever since. It is a sluggish stream at best, but its murky appearance is sufficient to show that it is carrying a large part of the sewage and refuse of the city away to the distant Gulf of Mexico, *via* the Rivers Illinois and Mississippi.

THE CABLE CAR.

It was in Chicago that I first met with street cars worked on the cable system. So far as the rails are concerned, a cable road is just like any other tramway; but midway between the rails there lies (level with the ground) what at first sight appears to be one of those old-fashioned iron gutters, with a narrow slit at top, by which, in some towns, the rain water from the roofs is carried across the pavement to the surface gutter outside the kerbstone. The narrow slit, apparently not more than half an inch wide, and running the whole length of the tramway, is the only thing visible. But on approaching the slit, you hear a slight hum and rattle, as of something moving underneath; and if the light happens to fall directly into the slit, you may perhaps see below a bright wire cable running rapidly upon grooved wheels fixed at regular intervals. If you then examine the other line (for the line must be a double one), you will find that the cable is continually running in the opposite direction. The two cables are, in fact, parts of an endless loop of rope, which may be several miles in length, and which is kept constantly moving at a uniform speed of eight or ten miles an hour, by means of engines of several hundred horse-power, "located" (as the Americans say) at some convenient point on the route. The narrow slit, with its iron lips, is, of course, only a part of a continuous trough or channel in which the supports of the cable are fixed.

It is obvious that any vehicle on the rails, which can reach down through the groove and take hold firmly of the ever-moving cable, is bound to run along as fast as the cable itself is moving, and to continue to run until its grip of the cable is relaxed. This, indeed, is the whole art and mystery of the "cable car."

A wide, flat bar extends from the car down into the groove, and this bar has at its lower extremity an apparatus by which the cable can be tightly gripped. The gripping, or the loosening of the grip, is effected in a moment by means of a lever which stands up in the middle of the car, and upon which the "driver" constantly keeps his hand. Another lever, close by, works a powerful brake. When the "driver" wishes to stop, he loosens the grip with one hand and puts on the brake with the other, and the car is almost instantly brought to a standstill. When he wishes to start, he does just the opposite—loosens the brake and grips the cable, and the car is in a moment moving at full speed. Several cars, which are continually starting and stopping, are running in each direction at the same time. The engines, moreover, are of very great power. The sudden gripping of the cable, even on a steep hill, appears, therefore, to produce no appreciable effect on

its speed. There are no hills, steep or otherwise, at Chicago, and it was not until I saw the system at work in the precipitous streets of San Francisco that I fully realised the value of the system.

All who are in any way conversant with mechanics and engineering will infer, from what I have said, that all the power generated by the cars when running down hill is fully utilised. This is the case. The cars keep hold of the cable when descending hills, and in doing this it is obvious that they are putting into the cable almost as much power as they take out of it when ascending. In short, they turn to good account the whole of the power which, in Bristol and other hilly cities possessing tram lines of the ordinary kind, is simply wasted in grinding away the brakes.

The car containing the grip and brake levers is known as the "dummy" car. Besides accommodating the driver and conductor, it provides seats for a number of passengers, who sit sideways, as on an Irish car, with their feet within a foot of the ground. The car has a roof, but is open at the sides, and passengers jump on and off without troubling the driver to stop. Behind the "dummy" are one or two larger closed cars of the ordinary kind, which are entered at either end. In State Street, Chicago, the "dummy" and its cars form quite a train, and these trains, usually full of passengers, succeed each other in quick succession—certainly as often as every two minutes. The street traffic is, indeed, immense.

Some of the ascents on California Street, San Francisco, are as steep as Lodge Street, Bristol, if not steeper. But to the cable cars ups and downs are all the same; the speed never varies. The sensation is a little alarming when one finds oneself for the first time going down such tremendous inclines at the rate of ten miles an hour; but a little experience of such travelling soon dispels all uneasiness, especially if one has made himself acquainted with the details of the system.

The first cable road ever constructed in England has just been laid and opened on Highgate Hill, in the north of London. I cannot doubt that the system will ultimately become universal wherever tramways on a large scale are needed; for it is, beyond question, the most perfect mode of street locomotion yet invented.

BRIDGES AND TUNNELS.

The two arms of the Chicago River, of course, cut the city up into three parts, and the principal streets cross the rivers by means of thirty or forty great swing bridges. These bridges are being constantly opened to allow of the passing of vessels, and the interruptions of the street traffic are consequently very frequent. So serious were the delays found to be, especially in the case of persons hurrying to catch trains at the various railway stations, that it was at last found necessary to construct two tunnels under the rivers. These subways, which were made at an immense cost, maintain an open communication between the three parts of the city at all hours of the night and day; and as it is never certain whether any particular bridge will be found open or shut, everyone to whom time or punctuality is an object uses a tunnel instead of a bridge whenever he is within reasonable distance of the former. The tunnels are something like our Thames Tunnel on a smaller scale, and they have proved so exceedingly convenient that the Chicago people are already looking forward to the time when the bridges will be abolished altogether and a tunnel substituted for each of them.

THE PLAN OF THE CITY.

The plan of the streets is rectangular to a degree which is painful to most Europeans, and must be perfectly maddening to those who worship the Irregular and the Picturesque. The eye looks for a curve in vain. The "crescent" and the "circular" of our English cities are unknown; and, except where some natural obstacle, such as the river or the lake shore, determines the direction of the streets, it is rarely that one sees any departure from the rectangular arrangement. The plan, however, is not precisely "chess-boardy;" for, although the corners of the blocks are almost always right angles, the blocks themselves are of varying sizes in different quarters of the city. The longest thoroughfares run north and south—that is, parallel with the shore of the lake. Some of these streets are represented on the map as being already laid out for a distance of ten or twelve miles. Possibly they may be so *laid out*, but it does not follow that they are, as yet, "streets" in any sense in which we understand the term. The truth is, American town plans are too often like those attractive maps of new seaside and holiday resorts which one sometimes sees hung up at English railway stations. The villas and mansions standing (according to these maps) in their own grounds, the convenient beach and railway, the handy church and club-house, the picturesque arrangement of terraces, squares, and crescents, and the lovely greens and blues with which the architect's draughtsman has touched up his work, present such an attractive picture, that one is induced to decide there and then to retire at once to the newly-discovered Paradise, or at least to take one's family there for a month during the coming holidays. Having arrived at one or other of these decisions, one discovers at the last moment that this charming plan represents only the "proposed" laying-out of such-and-such an "estate," whose owner, being desperately in want of money, has employed clever and imaginative architects and landscape gardeners to explain to the world that his hungry acres were expressly designed by Nature to be an Eden—in everything but the matter of clothes. Similarly, the maps of many American cities represent—not what actually is, but what a sanguine, go-ahead people, with no end of faith in the future, believe is *going to be*. This is particularly true of the maps of Chicago. On these maps (to choose an illustration from my own experience) a great, wide thoroughfare called Ashland Avenue is represented as running through the city from north to south, for a distance of ten miles. A stranger who follows this avenue through its whole length will have his faith in Chicago maps considerably shaken. For several miles, all will be plain sailing. The avenue, straight as a line, will be found to be tolerably complete and fairly well lined with buildings. But presently the stranger finds both the avenue and himself lost amid a maze of canals and mountains of timber. He is, in fact, in the midst of the vast lumber region which is one of the marvels of the place. Stumbling onward through a thick layer of dust and rubbish, such as one sees nowhere but in a great timber yard, and maintaining a straight line as nearly as the numerous obstacles in his way will allow, the stranger finds himself before long on the bank of a river or canal. Here, he thinks, Ashland Avenue must certainly end, for there is not a ghost of a bridge; but his map tells a different tale, and, on looking across the canal, he sees that the straight running appears to be taken up on the other side by a

wide, rough, sandy belt of unoccupied ground, having a forlorn-looking shanty here and there on each side. This, in fact, is the continuation of the "avenue"; and although there is at present no direct bridge to link it up into one continuous thoroughfare, this southern extension may be reached by a rather circuitous route over a bridge belonging to another line of street. If the stranger crosses by this route and pushes his explorations further, he will find the general line of the avenue continued several miles; but the greater part of this southern continuation is simply a sandy belt of waste ground, bordered here and there by a few buildings, and at one or two points passing through new and unlovely settlements of shanties.

But it must not be supposed that this description of the way in which a great avenue straggles out into the suburbs gives any idea of the central parts of the city. Chicago is no city of scattered shanties. A glance at some of its streets conveys the impression that it is rather a compact city of palaces. Many of its hotels, banks, public buildings, and private business establishments are not surpassed in magnificence and costliness in any city in the world. The principal business streets are those which lie within a radius of about a mile-and-a-half of the mouth of the Chicago River. Within this area are situated the Post Office, the Custom House, the City Court House, the Merchants' Exchange, the principal hotels, and all the great passenger depôts of the many trunk lines of railway radiating from Chicago. There are not as many stations as there are companies, as, in some instances, two, three, or even four companies run into the same terminus. There are, indeed, only about half-a-dozen great central stations. The various lines are, however, by means of cross lines in the suburbs, all connected with each other, with the lumber district, with the Stock Yards, and with the river and canals, so that the enormous traffic in live and dead agricultural produce and in goods generally is transferred from line to line or from point to point with the greatest facility. The many connecting links and junctions between the various lines, to say nothing of the almost numberless level crossings of line over line, render the railway system of Chicago as puzzling to a stranger as Clapham Junction is to a countryman.

PARKS AND BOULEVARDS.

Chicago has not been so entirely absorbed in money-making as to have no time to spare to think of its health and recreation. Its system of public parks and boulevards is a marvel, considering the youth of the place. These beautiful breathing-places well-nigh girdle the city on the three land sides; and even on the lake shore, interposed between the water and the busiest business streets, there is a long enclosure known as the Lake Park. On the south side of the city are the two South Parks. These abound in artificial lakes, are beautifully laid out, and are connected with each other and approached from the city by wide boulevards. These boulevards have been laid out somewhat on the plan of the Avenue of the Champs Elysees and the Avenue de l'Imperatrice in Paris. Drexel Boulevard, for instance, is 200 feet wide and a mile and a-half long. Through its whole length are two sidewalks, two wide roadways, and a central enclosure full of flower-beds and shrubs. There are also avenues of shade trees, trellis-work with creepers, rustic seats and bowers, fountains, and various other charming features. These boulevards are reserved entirely for walking, riding, driving, and other forms of recreation and amusement. On the west side of the

city are Douglas Park, Central Park, and Humboldt Park, containing, probably, a square mile between them. These, again, are linked together by another system of splendid boulevards somewhat similar to those already described. To the north, stretching a mile and a-half along the lake shore, is Lincoln Park, and from this stretches out a wide avenue called the Lake Shore Drive, which extends another mile in the direction of the centre of the city. Add to all these a long boulevard which almost connects the South Parks with those on the western side, and, further, four or five smaller, scattered parks, somewhat of the character of our city square gardens, and it will be seen that the citizen of Chicago, turn which way he may, can soon find his way to a place of recreation, where flowers and turf and quiet take the place of the dust and bustle of the city.

SHADY QUARTERS.

But it must be admitted that Chicago is as much a city of contrasts as London itself. I do not mean that it contains a vast mass of hopeless, squalid poverty, as our metropolis does. The contrasts are rather in the appearance of the city than in the condition of its inhabitants. The parks and boulevards, and the fine houses that are rapidly springing up round them, are not unworthy to be compared with the West-end of London. Further, the architecture and general appearance of the great business streets are not surpassed in the City of London or in any other of our large towns. But between the central parts of Chicago and its charming ring of parks and boulevards, there lies a wide and populous region which in many parts is unlovely to the sight and not very pleasant to the smell. The inhabitants are apparently prosperous enough, but they and their surroundings are decidedly "grubby." Thousands of their houses are of wood, and the majority of these are terribly dingy for want of paint. Whole streets of them look so rickety, so far gone in decay, and withal so unwholesome, that one is half disposed to think another great fire would, on the whole, be a blessing rather than a calamity. The streets themselves, moreover, in these second or third-rate districts, are badly made and imperfectly cleaned, if cleaned at all; so that there is the usual supply of black mud in wet weather, and the usual deep layer of sooty, impalpable dust in the absence of both water-cart and rail. Tens of thousands of the inhabitants of these vast regions are Germans, and the name of the retailers of their national beverage, lager beer, is Legion. Irishmen, too, abound, a large number of them being keepers of "saloons" (whisky shops). I learn on good authority that Chicago possesses an enormous length of splendid sewers, built on the most approved principles, without regard to cost. ("Hang the cost!" appears to be the Chicago motto); but I have very grave doubts whether there is any sort of connection between these sewers and some of the dismal streets I passed through on my way to the Stock Yards and the lumber district. Judging from appearances, I should have said that a large part of Chicago is unhealthy; but I am assured that the city, as a whole, shows a very moderate rate of mortality for so young and rapidly-growing a place.

THE GREAT FIRE OF 1871.

Up to the autumn of 1871, Chicago consisted much more largely of frame buildings than it does now. A frisky cow revolutionized the place. That "gay and festive cuss" (Americanese) was—so the story goes—being milked by the light of an oil lamp, in a

little stable near the crossing of Twelfth Street and Jefferson Street, at nine o'clock on the evening of Sunday, Oct. 8th. The cow kicked out and upset the lamp, and in a few seconds the stable and its store of hay were in flames. What became of that cow History has forgotten to say. The wind was blowing with the strength of a gale from the south-west, and within an hour the whole neighbourhood was ablaze. The surrounding blocks were shanties of the most inflammable kind, dry as tinder, and the fire made short work of them as it swept on towards more substantial prey in the business parts of the city. By midnight, three hours after the outbreak, the flames had leaped the southern arm of the Chicago River, having already progressed half-a-mile. The most important part of the Southern Division of the city was now clearly doomed. In a very short time, the splendid stone buildings of the leading business streets were attacked, and block after block went down with the most amazing rapidity. Iron, stone, brick, marble were equally incapable of resisting the march of the destroyer. "Fire-proof" buildings by the score succumbed as readily as if they had been built of dry deal. The distinction between combustible and incombustible substances appeared to disappear; all were found to be alike combustible when subjected to the unprecedented and hitherto undreamt-of intensity of heat. From the Southern Division the flames leaped on Monday across the main stream of the river to the Northern Division. The Waterworks were destroyed immediately, and by Tuesday morning the fire had reached the northern limits of the city, nearly four and a-half miles from the stable where it originated. It ceased to spread at last because there was nothing more to be destroyed in the direction towards which the wind was blowing it. Even Lincoln Park was not spared. Its scattered oaks were reduced to dismal pollards and its grassy surface to a blackened wilderness.

By this stupendous calamity, over 2,000 acres of the very heart of the city were cleared of everything except two isolated buildings. The number of houses, factories, warehouses, and other buildings destroyed was 17,450. It is believed that 200 lives were lost, and almost exactly 100,000 persons were rendered homeless. The money loss, not including loss of business and depreciation of the value of property, was about forty millions of English pounds. Not one-fourth of this was ever recovered from the insurance offices, for many of the insurance companies were ruined by the fire.

But the Chicago people did not sit down among the ruins of their city and wring their hands in despair—not much (as they would put it). With characteristic enterprise and energy, they began to rebuild their dwellings and business premises before the fire was fairly out, and within a year or two almost every trace of the great calamity had disappeared. And the new city is far statelier, more enduring, better adapted to the purposes of its inhabitants, than that which went down amid the tempest of fire. The authorities took care that no fresh fuel should be heaped together. The erection of frame houses within the city limits was forbidden, and the district swept by the flames is now covered with buildings of the most substantial, and in many cases of the most splendid, description. I discovered traces of the fire in only two places. One of these was at the railway station at which I arrived, on the lake shore. That great depot, the terminus of three or four important lines, has not yet been rebuilt. It is said that the companies concerned are unable to agree about

the rebuilding, and so for 13 years they have conducted their passenger business in a collection of dismal, dirty sheds, which were hastily run up amid the ruins as soon as they were cold. Parts of the walls of the old station are still standing, and their appearance bears eloquent testimony to the awful intensity of the heat to which they were subjected. They look precisely like heaps of round but slightly flattened flour bags, neatly piled on each other, as one sometimes sees such bags piled in a shop window. The angles and corners of every stone have been burnt off, and the whole mass has been so completely calcined as to be apparently ready to be blown away in the form of dust.

The Chicago fire was probably the most awfully grand spectacle of its kind ever witnessed in modern times. It was necessarily accompanied by many stirring and dramatic scenes, which will duly take their place in the history of the city. When the Court House was attacked by the flames, there were 150 prisoners in the cells of the basement. These the city officials released in order to save their lives, and they immediately displayed their gratitude by sacking a neighbouring jewellery store. While this was going on, the telegraph operators in the Merchants' Insurance building, opposite the Court House, arrived at the conclusion that it was about time to move; but they clearly stuck to their posts till the latest possible moment, for the clerk who was telegraphing off an account of the fire to the Associated Press left off at last in the middle of a word. This clerk deserves to be immortalised in the company of that very cool Englishman who was awoke at midnight in a Vienna hotel by the porter knocking at his door and telling him the place was in flames. "How far has the fire got along this corridor?" asked the Englishman, without moving. "As far as No. 20, sir," was the reply. "And what number is my room?" inquired the Englishman. "No. 100, sir," answered the porter. "Then wake me again when the fire reaches 97," cried the voice from the bed.

The inhabitants of the Northern Division were almost caught in a trap. It was early on Monday morning that the flames leaped the main river and attacked their quarter, and by some mysterious means the Waterworks buildings, a mile north of the river, were among the first to be ignited. The people were standing at their doors, gazing at the sea of fire which was raging over the Southern Division, when they suddenly discovered that the dreaded enemy had obtained a lodgment in their rear, and there was instantly a wild stampede of thousands to the prairie and the lake shore. An eyewitness says that blazing brands and scorching heat were carried far ahead by the gale. These set up numerous scattered fires in advance, and presently the great, general conflagration itself came up, absorbing and overwhelming all. This no doubt accounts for the people of the Northern Division being taken in the rear. The same writer, speaking of the fire generally, says: "As a spectacle, it was, beyond doubt, the grandest as well as most appalling ever offered to mortal eyes. From any elevated standpoint, the appearance was that of a vast ocean of flame, sweeping in mile long billows and breakers over the doomed city. A square of substantial buildings would be submerged by it like a child's tiny heap of sand on the beach of a lake; and when the flood receded, there was no more left of the stately block than of the tiny sand-heap. Anon the devouring element would present itself as if in a personal form, and seize upon a masterpiece of architecture as if it would say to the pile faces around and below:

'See, now! Here is a pile of massive marble. You built it with great pains, and thought you had something substantial. Mark, now, what a bubble it is. Piff!' And the proud dome collapsed, and stately wall, and ornate capital,

—all, mingling, fell!

nor left a vestige of their former splendour. Added to the spectacular elements of the conflagration—the intense and lurid light, the sea of red and black, and the spires and pyramids of flame shooting into the heavens—was its constant and terrible roar, drowning even the voices of the shrieking multitude. And ever and anon—for a while as often as every half minute—resounded far and wide the rapid detonations of explosions, or of falling walls. The infirm crust of earth on which the city stands was shaken by each shock. At three o'clock in the morning, the great gasometer exploded with a thundering sound. About the same hour, the great bell of the Court House fell. In short, all sights and sounds which terrify the weak and unnerve the strong abounded. But they were only the accompaniment which the orchestra of Nature was furnishing to the terrible tragedy then being enacted, in which the fate of every person of that surging throng was vitally involved."

Chicago has (and had in 1871) a splendid Fire Brigade. What that Brigade did during the days and nights of the great fire, nobody seems to know. A writer who described the scene says he concluded the firemen were somehow engaged—not because he saw them or heard of them, but because it is their custom to attend fires, and because the remains of two of their engines were subsequently found in the ruins. Whether they were present or not was, however, of no consequence, because, after the first half-hour, they were as powerless to resist the progress of the fire as a child is to stop the tide by means of his bucket and spade. The Brigade, I may add, numbers 400 men. It has some forty steam engines and about six miles of hose. There are 400 signal boxes from which an alarm of fire can be telegraphed to the various stations, and the total cost of the establishment is a million dollars a year. The bitter experience of the inhabitants has, of course, stimulated them to make their Brigade as efficient as possible, and it is certainly a marvel of organization. Whether, with all its efficiency and promptitude, it will be able to save the city from a repetition of the calamity of 1871 is more than anyone can say. As I have already remarked, vast districts are still covered thickly with frame buildings. Tens of thousands—I might probably say with truth hundreds of thousands—of the inhabitants still live in wooden houses. Fires are of daily occurrence. As a rule, they are crushed instantly, so perfectly is the Fire Department organised. But it is impossible to think without apprehension of what *might* happen if another cow, or some other imp of mischief, were again to choose the moment when a gale is blowing as a convenient time for starting a blaze, and if, through some blunder or misunderstanding, the firemen failed to arrive for twenty minutes. The result might very possibly be the burning-out of another hundred thousand people. The new buildings erected on the sites of those destroyed in 1871 would probably escape, but nobody who realises what the last fire was like can feel at all sure about it. The new buildings are all of stone, iron, or brick, and are largely "fire-proof," but so were many of those which succumbed so promptly in 1871. The truth as to these "fire-proof" buildings I take to be this. They are probably incapable

of burning *alone*; and if a fire breaks out among the furniture or other contents of one of them, it is not likely to involve the destruction of the structure itself. But when they are attacked from without, and on all sides at once, when they suddenly find themselves in the midst of a raging furnace, hundreds of acres in extent, and are completely overwhelmed with an atmosphere of flame of incalculable intensity, then it is that their claims to resist the action of fire are fully tested; and as a rule they do not survive the test.

A GREAT PORT 2,000 MILES FROM THE SEA.

When I say that Chicago (and it is to Chicago I refer) is 2,000 miles from the sea, I do not mean that that is the distance by the direct land route. As the crow flies—or, as the Americans say, by a "bee line"—Chicago is considerably less than 1,000 miles from the Atlantic seaboard. What I mean is, that the distance by water, *via* the lakes, the canals, and the St. Lawrence, approaches 2,000 miles. It is, however, a port of the first order, notwithstanding its position in the very centre of the continent. I have not the latest statistics of its shipping trade before me, but I may say that four years ago—which may be regarded as ancient times in the history of such a place—Chicago stood a good second among American ports in the tonnage of shipping arriving and departing. New York alone exceeded it in tonnage, while in the number of vessels arriving and departing Chicago beat New York by more than two to one. This, of course, is due to the fact that the lake ships are at present much smaller than the ocean-going steamers which represent the bulk of the New York tonnage. In 1879, over 12,000 vessels arrived at and departed from Chicago between May 1 and Nov. 30—that is, during the period of lake navigation. (The lake canals are frozen in winter and navigation is suspended.) During the same period, only 5,550 vessels entered and cleared at New York, 2,600 at Boston, 2,400 at Baltimore, and about 1,900 at Philadelphia. In point of tonnage, New York stood first with 5,000,000 tons, and Chicago second with nearly 4,000,000. At present, the Welland Canal (cutting off Niagara) and the St. Lawrence canals (giving the go-by to the rapids) can take vessels of only 500 or 600 tons; but they are being deepened and improved, and are designed ultimately to admit ocean-going vessels of 2,000 tons. When this great work is accomplished, the importance of Chicago as a port will be enormously enhanced; for there can be no doubt that a direct shipping trade on a large scale will spring up between it and Europe as soon as it gets direct access to the sea by means of large vessels.

LIVE STOCK BY THE MILLION.

Chicago has long been the greatest cattle market in the world. The Union Stock Yards, in which its enormous business in hogs and horned cattle is conducted, are one of the great sights of the place. They are just outside the city limits, on the south side, and are surrounded by a perfect network of railway lines which connect them with every railroad entering the city. At a rough guess, I should say the yards cover 150 acres. They will accommodate 150,000 hogs, 25,000 cattle, 22,000 sheep, and 500 horses; and every day appears to be more or less of a market-day. The yards contain 8 miles of streets and alleys, 2,300 open and covered pens, 2½ miles of water-troughs in the pens, and 32 miles of sewers. 25,000,000 feet of lumber and 800,000 lbs. of spikes and nails were used

in their construction. The "streets," or passages, are paved or gravelled, and the pens are floored with 3-inch deals, the drainage and water supply being excellent. There are 25 miles of railroad in the yards. Trade was slack on the day of our visit, but the newspapers stated that on the previous day 14,000 head of horned cattle changed hands. We saw one "deal" for a lot of cattle effected. The owner and the would-be purchaser came trotting up through the yard on a couple of rough wiry ponies (the place is too large to allow of the dealers going about on foot), and an attendant opened the pen containing the cattle and allowed both men to ride in. The high partitions between the pens are made very wide at top, so as to form a path, and from this vantage ground we obtained a bird's-eye view of the transaction. The dealers' words were few. I did not notice that they separated several times as if unable to agree, and then came together again and again to make fresh attempts. Neither did I notice that at last they gave up the job as hopeless, and that, when almost out of earshot of each other, the seller turned and bawled: "Here, thee gie I another shillin' for luck, and thee can aa' m." I have heard business done in this way nearer home, but that does not appear to be the Chicago fashion. The deal in the case in question was soon effected, the price being 5 dollars 40 cents per 100 lbs., live weight, or not quite 2½d per lb. The gate of the pen was instantly opened, and the herd of cattle driven towards one of the "Fairbanks" weighing-houses. (Fairbanks is the famous American maker of weighing machines.) The cattle entered the weighing-house on one side, were weighed all together, and driven out and away on the opposite side, the whole business being effected in an incredibly short time. Possibly those cattle were spiced beef before night.

To quote all the statistics I have before me of the business done at the Stock Yards would be simply to weary the reader with columns of figures, and I will merely quote a few of the gigantic totals. Judging from the latest returns in my possession, I estimate the numbers of the live stock now annually received at the yards to be about as follows:—one-and-a-half millions of horned cattle, seven or eight millions of hogs, and from a quarter-million to half-a-million sheep; the total value far exceeding one hundred millions of dollars.

THE MEAT TRADE.

The cattle and hogs which enter Chicago in such vast numbers leave the place mainly in the shape of beef and pork. When they reach the Stock Yards, they are very near the end of their earthly journey. Close to the yards are several vast groups of buildings of the kind which figure on the highly-coloured labels of preserved-meat tins. They are, indeed, the very same buildings. I must, however, caution my readers against accepting those handsome pictures as in all cases faithful portraits. They, as a rule, greatly flatter the subject. According to the label, a packing-house is a handsome and attractive building, truly palatial in size and appearance. In reality, it is generally otherwise. Large it is beyond all possibility of dispute; but architecturally it is often on a level with the "elevators" already described, and its appearance and surroundings are unenviable. The business of wholesale slaughter, in short, is not a clean or pleasant one, and any attempt to make it other than what it is must necessarily fail.

There are at least thirty packing establishments in Chicago, and the business done in some of them is per-

fectedly astounding. Armour & Co., the largest concern, kill nearly three-quarters of a million hogs per annum, and some other houses are not far behind. The total weight of pork turned out by Chicago exceeds half a million tons per annum. The quantity of beef is also prodigious, but I have not the latest returns before me.

It is curious to reflect that the mainspring of all this vast trade is the hunger of Europe, chiefly of Great Britain. It is mainly to feed the overflowing populations of our great cities, which have far outrun the resources of our own agriculture, that Chicago sweeps into her stupendous granaries and slaughter-houses the surplus live and dead produce of half-a-dozen great States. It is for us that the forests of Michigan and Wisconsin have been cleared, that the prairies of Illinois and Iowa, of Kansas and Missouri, of Dakota and Nebraska, have been or are being brought under the plough. For us, chiefly, has that wonderful spider's web of railroads been constructed whose centre is in Chicago; and it is with a view to us and our needs that vast sums are even now being spent in bringing that centre into direct water communication with our own ports. In short, it is the hunger of Europe which has been the chief cause of the peopling of the West and of the creation of its wonderful prosperity.

But though Europe in general, and Great Britain in particular, are the largest customers for western meat and grain, they are not the only ones. Of late years, Chicago has become a great meat market for the whole continent. Pork and beef, in the fresh state, are dispatched in immense quantities, in refrigerating cars, to the remotest corners of the States. I ate beef which had been killed at Chicago when I was in Maine, the easternmost of all the States. Very likely I did the same, without being aware of the fact, when in California; and if I had gone to Florida, I should undoubtedly have found Chicago meat there also.

I stated, when I described the Don Packing-house at Toronto, that I should not think it necessary to inspect a second establishment of the same kind. That intention I adhered to, contenting myself with a look at the outsides of the huge concerns at Chicago. Perhaps, however, I may be allowed to conclude my remarks on this subject by quoting the following account of "How a Pig Suddenly Became Pork," from the lively pen of Mr. Phil Robinson. The general description of the business is, no doubt, as nearly accurate as could be expected of a lively writer, but I am bound to express my scepticism on one point—viz., the time occupied in the process. I am disposed to think 35 seconds—well, not an exaggeration, but the other thing. Mr. Robinson says:—

"A lively piebald porker was one of a number grunting and quarrelling in a pen, and I was asked to keep my eye on him. What happened to that porker was this: He was suddenly seized by a hind leg and jerked up to a small crane. This swung him safely to the fatal door through which no pig ever returns. On the other side stood a man. That two handed engine at the door was ready to smite once, and smite no more, and the dead pig shot across a trough and through another doorway, and then there was a splash. He had fallen head first into a vat of boiling water. Some unseen machinery passed him along swiftly to the other end of the terrific bath, and there a water wheel picked him up and flung him on to a sloping counter. Here another machine seized him, and with one revolution scraped him as bald as a nut. And down the counter he went, losing his head as he slid past a man with a hatchet, and then, presto! he was up again by the heels, in

one dreadful handful a man emptied him, and while another squirted him with fresh water, the pig, registering his own weight as he passed the teller's box, shot down the steel bar from which he hung, and whisked round the corner into the ice house. One long cut with a knife made two "sides of pork" out of that piebald pig. Two hacks of a hatchet brought away his backbone. And there in thirty-five seconds from his last grunt—dirty, hot headed, noisy—the pig was hanging up in two pieces, clean, tranquil, iced! The very rapidity of the whole process robbed it of its horrors. Here one moment was an opinionative piebald pig, making a prodigious fuss about having his hind leg taken hold of, and, lo! before he had made up his mind to squeal or only squeak, he was hanging up in an ice house split in two. He had resented the first trifling liberty that was taken with him, and in thirty-five seconds he was ready for the cook."

GRAIN AND LUMBER.

I have already referred more than once to the grain trade of Chicago. Its extent may be judged of from the following figures. The elevators in the city can store nearly twenty millions of bushels, and in the course of every year at least four times that immense quantity passes through them. More than half of the grain received is maize, or, as the Americans call it, "corn;" but the wheat amounts to nearly two million quarters. Oats, barley, and rye constitute the balance. Several years ago, the grain received filled nearly a thousand lake ships, and about 160,000 railroad cars, and the trade has vastly increased since then.

The rapid growth of Chicago owes, of course, an immense demand for timber, even though the erection of frame buildings is now forbidden within the city limits. The lumber trade is consequently enormous, and probably ranks next in importance to the meat and grain trades. I have already referred to what is known as the "lumber region." This is in the Southern Division of the city, alongside the southern arm of the river. Here about a dozen short, straight canals, parallel with each other, and only one or two hundred yards apart, branch from the river; and along each jetty-like tongue of land thus formed run lines of rail which are connected with all the railroads centreing in Chicago. Those who have followed this description will see that an immense area has thus been turned into a combined canal and railway wharf, presenting miles of water frontage for vessels, and as many miles of space for the loading or unloading of railroad cars. This is the geography of the "lumber region;" and when one has looked over this region from a commanding point, and fairly realised the immense bulk of the mountains of lumber always lying there, he ceases to wonder that the Americans are already beginning to feel anxious about the rapid destruction of their forests. It looks as if the lumber merchants were always holding stock against the next great fire.

THE WATERWORKS.

One of the most wonderful and unique of the institutions of Chicago is its waterworks. The lake, of course, contains an unlimited supply of water, and nothing would appear easier than to pump out just as much as may be wanted. But, even though the greater part of the sewage and offal of the city may be sent off to the Mississippi by way of the Illinois Canal, as already described, a good many impurities still find their way into the lake. Water taken out close to the shore is accordingly unfit for

domestic purposes; and, as soon as the growth of the city rendered this fact obvious, the question arose how water was to be got from a point so far removed from the shore as to be beyond the reach of contamination. The same question had no doubt arisen before then in other places, but the Chicago people solved the problem in a perfectly novel way. They constructed a small tunnel, two miles long, under the bed of the lake, and then (to put the thing familiarly) knocked a hole in the bottom of the lake and let the water into the tunnel. The water is pumped out of the shore end of the tunnel. As it comes from the bottom of the lake two miles from shore, it is pure and wholesome. The knocking the hole in the bottom of the lake was not so simple a matter as may be supposed. It had to be done by means of an immense cofferdam, which was constructed on shore, floated out to a point exactly over the end of the tunnel, and there secured to the bottom. The water was pumped out of the centre of this structure, and in the dry space thus secured a well was dug downwards till the tunnel was reached. So greatly has the demand for water increased that a second tunnel, alongside the first, has been constructed since the fire. The quantity which can be pumped through these two tunnels is 150,000,000 gallons per day. The principal pumping station is in the Northern Division of the city, close to the shore end of the tunnel. The water is there pumped to the top of a high tower, and sufficient pressure is thus secured to carry it to the highest points where it is required. There are three or four wonderful engines at this pumping station. They are of the old-fashioned, slow, beam pattern, and of enormous power. With the exception of one other pair of engines of the same class, of which I shall have to speak shortly, they are the most ponderous I ever saw. There is another pumping station, with two similar engines, in the southern part of the city. The public are allowed free access to the engine-rooms, as well as to the top of the water tower.

A BABEL OF "BULLS" AND "BEARS."

One of the sights of the city is the Merchants' Exchange or Chamber of Commerce. Here, day by day, wheat, maize, pork, and beef, in incredible quantities, change hands amid a scene of noise and excitement such as would drive any English merchant mad. Only members of the Chamber (who number nearly 3,000) are admitted to the floor of the great hall, but strangers are allowed to look down upon the gesticulating and howling crowd from the galleries which surround it. We duly found our way to the gallery. I should like to convey an adequate impression of the scene we witnessed, but I feel as incapable of doing justice to it as to Niagara. In the matter of noise, the two scenes are pretty much alike. The chamber is 140 feet long, and nearly 90 broad. In each corner is a telegraph office, with connections with all parts of the country and the world. At two places in the room there are shallow pits, surrounded by low circular standing-places, rising step by step to a height of three or four feet. So far as it was possible to make out anything amid the Babel, I gathered that a dealer who had grain to sell took his stand in one of these pits, and was at once surrounded by an eager crowd of buyers, who, standing tier above tier around him, were all within full view of him. The dealing consisted apparently in all the buyers howling at the seller at the top of their voices and violently shaking their fists at him, all at the same time and for

three or four minutes at a stretch. Occasionally, I heard the word "cents" above the din from some extra case-hardened throat, and I gathered from this that the group was doing business instead of being engaged in a violent quarrel. Presently, there was a slight lull in the uproar, and I saw the man in the pit and one of those on the raised gallery make notes in their pocket-books. I concluded from this that a deal had been effected. Then the uproar broke out again. The bidders gesticulated more wildly and howled more loudly, and in due time entries were made in other pocket-books. But the noise at this pit was only one element in the Babel. A similar scene was being enacted at the other pit. In addition to all this, scores of groups, from two upwards, were scattered over the immense floor, doing business in the same excited and noisy fashion. Men were rushing to the telegraph offices in the corners of the room to wire off messages, while telegraph messengers were every moment issuing from those offices to deliver telegrams to different members. So far as speaking went, it was one universal competition in howling all round. The din was so great that even two persons in conversation had to bawl into each other's ears. The ultimate victory was to the strong-lunged and the brazen-throated. The weakling was nowhere. Shrewdness and experience are no doubt essentials in this kind of business; but it is at least equally necessary to be sound in the chest and the larynx. A man who thinks of going on the floor of the Chicago Exchange ought to be first medically examined in both regions.

How completely the telegraph has converted all markets into one! Even as we watched the proceedings in this Chicago Babel, the quotations in New York, St. Louis, and other great centres of trade were constantly arriving for the guidance of buyers and sellers. Sometimes the messages were private; but in other cases they appeared to be public, the figures being at once conspicuously chalked on a black board. Chicago time being nearly six hours later than English time, our home markets were, of course, over before the Chicago Exchange opened; and the dealers in the latter, therefore, started with a full knowledge of what had been done, not in Great Britain only, but in all the principal centres of the grain trade in Europe. In the presence of such universal knowledge, brought up to the latest moment, there would not seem to be much room for speculation. But Chicago men often find room for it. Grain, pork, and lard are in turn made the subjects of speculation on the most prodigious scale. The "rings" and "corners" of the "bulls" and "bears" of the Chicago Exchange are a byword throughout the trading world. As they seriously interfere with the course of legitimate trade, it is satisfactory to know that the speculators very often overreach themselves and fall into the pit which they have dug for others.

A GREAT HOTEL.

Everything in Chicago is big, as my readers will have gathered from what I have already said. The hotels are, of course, on the largest scale. The Palmer House, the Grand Pacific, and the Tremont House are among the finest and most sumptuous in the country. The Palmer House is the finest of the three, and my companion and I selected it as our temporary home for the purpose of seeing the best thing that Chicago had to show in the hotel line. The first Palmer House perished in the great fire, but from its ashes a larger, more

stately, and more gorgeous building soon arose. The cost of the structure and the furnishing was nearly three millions of dollars. It accommodates 700 guests. The proprietors say it is the only really fireproof hotel in the States. After what I have already said about so-called "fireproof" buildings, it is scarcely necessary for me to remark that I do not attach much importance to this claim. That the hotel would not burn *alone* is possible; but that it would be destroyed if surrounded by a thousand acres of fire, as its predecessor was, is at least equally certain.

The Palmer House, like most great American hotels, has numerous stores (shops) on the ground floor. The frontage in the main streets of the great cities is so valuable if devoted to stores, that hotel proprietors obtain a considerable return on their enormous outlay by reserving only entrance space for their hotels, and converting all the rest of their frontage into shops. These shops are frequently made to communicate with the lobbies and halls of the hotels, as well as with the street; and as they are usually let to barbers, perfumers, tailors, hatters, makers of trunks and travelling gear, railroad ticket agents, keepers of "gentlemen's furnishing" stores, and the like, the hotel guests are able to do most of their shopping without leaving the building.

THE BARBERS.

The barber's shop of a great hotel is, to a stranger, a curious sight. The daily shave is at present much more of an institution in America than it is in this country. In the Far West, moreover, many men are not content to have merely their chins kept clear of hair. Their heads are almost equally bare, the cutting being frequently done by means of an apparatus like a horse-clipper. The Californian is thus often nearly bare-headed as well as bare-faced. Under these circumstances, the barbers are numerous and flourishing. Their trade emblem is prominent in every street. This is not the long slender pole, with the spiral bands of paint, which are still mounted diagonally across the pavement by some of our English barbers. The Americans have "improved" upon this; at least they have altered it. The spiral markings are still retained, but the pole usually assumes the form of a square, hollow, wooden erection, tapering towards the top, which will stand alone on the pavement. Sometimes the thing is a fixture, but very often it is moveable and is taken in at night. In many instances, it stands on the very edge of the footway. In this respect, the barber only takes the same liberties with the thoroughfare which everybody else takes. In many cities, the edge of the pavement is so encumbered with telegraph posts as large as the main mast of a ship, with hitching posts for horses, with raised steps for the benefit of those mounting horses and carriages, and with trade emblems of all kinds, that the pedestrian has to look well to his ways, especially after sunset.

But to return to the barbers. The shops of these artists are furnished with luxurious and ingeniously-constructed lounges, in which the persons operated on lie at full length and in an almost perfectly horizontal position. The man who is being shaved thus presents his throat to the operator without bending his head back in the awkward and tiresome fashion so common in England. There is a comfortable rest for the feet, almost on a level with the patient's head; and if he (the patient) happens to want his boots cleaned, he can be operated on at both ends at once, as a "boots" is often attached to the establishment. In the barbers' shops attached to some of the great hotels, it is not an

uncommon thing to see half a dozen or more gentlemen under the operators' hands all at one time; and the row of patients lying lazily on their backs, sometimes with one set of artists engaged on their heads and another set on their boots, presents a curious and (to a stranger) a rather ludicrous spectacle. Hair-cutting, when it does not amount to close clipping, is quite a long and elaborate business, and the charges are in proportion. A San Francisco artist, at the Palace Hotel in that city, operated upon me, and his coloured gentleman "shined" my boots (as the Americans say in defiance of grammar) as I lay. His bill was as follows:—Cutting hair, 25 cents; trimming beard, 15 cents; cleaning boots, 10 cents; total, 50 cents, or half a dollar (2s). Those are long figures, no doubt; but then the operator was a long time over the business, and he took off so much for the money that I have only recently recovered from the effects of his handling. Moreover, the work was done in a city and in a State where the smallest coin in use is the nickel (2½d), and where, therefore, you cannot buy so little as a pennyworth or even twopennyworth of anything. I have, moreover, heard of a dollar being charged for a hair-dresser's services.

BOOT-CLEANING.

But let me hark back twenty-three hundred miles to the Palmer House, Chicago. In this and in almost all the larger hotels, the only way in which you can get your boots cleaned is to have it done while they are on your feet. It is not safe to put boots outside your bedroom door—that is, unless they are very shabby and not worth stealing. The hotels are so vast, the corridors so long, and the number of strange visitors constantly moving about so large, that it is well nigh impossible for the hotel servants to maintain efficient supervision and to keep the buildings clear of professional thieves. Guests are often cautioned by means of printed notices not to leave anything in the corridors. The warning is not always acted on, for I heard of missing boots in one or two places. While I was staying at the Fifth Avenue Hotel at New York, an innocent Englishman put out his trousers to be brushed, just as he would have done at the Red Lion or the King's Arms in a country town at home. He never saw that garment again. Let us hope he had another!

Shoeblocks abound in the street, but it is not necessary for a hotel guest to leave the house to get his boots cleaned. Every hotel has its boot-cleaning room and its staff of "boots." This branch of the Palmer House establishment is on the same scale as all the rest of it. The room contains three or four luxurious easy chairs, raised a foot or two from the floor on a huge block of white marble. In front of each chair is a raised iron rest, the shape of the sole of a boot. You mount into one of these chairs, place your foot on the rest, and smoke your cigar or read your paper. One of the staff of shoeblocks (who are also porters) turns up your trousers and sets to work, and in two minutes asks you to change feet. In two minutes more, the business is "through" (again to use an Americanism), and you hand over 10 cents (5d). Here, again, the price is far above the English standard. But, then, you cannot reasonably expect to be allowed to sit for five minutes on a marble throne without paying for the privilege. The charge is, no doubt, so calculated as to include 5 minutes' interest on the cost of the throne.

A DISAGREEABLE SUBJECT.

The great hall of the Palmer House is a splendid room, with a marble floor, and a roof supported by

many marble columns. It presents a lively spectacle at all times; but in the evening it is not unlike the Chamber of Commerce on a small scale. It is then filled with groups of men, some standing and some sitting, but all talking "shop" loudly and excitedly, and all, with very few exceptions, smoking incessantly and spitting copiously. And now that I have had occasion to refer to a very disagreeable subject, I may as well once for all say what I have to say about it. Smoking, chewing, and spitting are undoubtedly the three chief nuisances to which travellers are subjected in America. Smoking is almost universal, and it is in the form of cigars that the tobacco is usually consumed. Seeing that the price of cigars is, like that of most other things, very high, the amount annually spent on smoke must be something fabulous.

It is very difficult to get beyond the reach of the fumes of tobacco, go where you may. There are smoking cars on the railways, it is true; but the smokers have a right of way through all the ordinary cars, and if they do not actually smoke in those cars, they stand about in the passages and at the doors as long as they please, their cigars smouldering and contaminating the air all the time. But the habit of incessant spitting is far more objectionable than the universal smoking, especially when the expectoration is due to the chewing of tobacco. It is difficult to convey to a stranger any adequate idea of the extent to which this leasty habit prevails in certain parts of the country. At the Palmer House, for instance, the beautiful marble floor of the hall is spotted all over with huge blotches of brown tobacco juice. Spittoons are scattered about in profusion, but many chewers take no notice of them and expectorate at large. Nothing but frequent mopping prevents the floor from getting into a perfectly intolerable state.

In the Pullman cars, which are handsomely carpeted, there is a spittoon to every section, and as a rule the passengers use it. But even here, the nuisance sometimes reaches a very aggravating pitch. I have seen a gentleman and lady eating their dinner in one section of a car, on the little table which the attendant can "fix" for a passenger at a minute's notice. In the opposite section, barely a yard off, has sat another gentleman, expectorating every half-minute into a spittoon on the floor of the narrow passage which divided him from the dinner party. Every discharge was preceded by a violent drawing in of the breath and a spasmodic movement of the throat, accompanied by a horrible sound like that of lath-rendering combined with that of saw-sharpening. This preliminary performance—throat-clearing, as the performer would probably have called it—was, if possible, more disgusting than the ultimate delivery. But I could see that it had never occurred to this well-dressed man that he was doing anything unmannerly, and I am bound to admit that the diners showed no annoyance. Habit had evidently rendered all the parties concerned insensible to a performance which would have turned a stranger sick.

Among the passengers on board the *Germanic*, the steamer by which I returned home, was an expectorating young man from Texas. On one or two occasions, I sat near him on deck for an hour at a stretch, and I once took the liberty of timing him. He let fly at a point on the floor, about six inches in front of my toes, once every half-minute, and his accuracy of aim was as wonderful as his supply of saliva. He did not appear to be a chewer, and I was entirely at a loss to know what pleasure or profit he found in robbing his system

of one of its most important secretions in this wholesale fashion.

I have remarked that men sometimes refuse to use spittoons even when they are provided, but it is said that there are certain outlandish districts where the very use of that utensil is not understood. A good story is told of a rough Texan who went up to Washington to have an interview with a high Government official. He was duly ushered into a handsomely-carpeted room, where the great man was sitting at a desk. The Texan took no notice of the carpet, but fired away to right and left as usual. A negro attendant, who was in the room, was much disturbed at this; and, taking up a spittoon, he moved it hither and thither, according to the direction in which the Texan discharged, in the hope of presently catching his eye and inducing him to spit on the carpet. His eye was caught at last, and for some time the Texan watched the dodgings of the attendant with puzzled amusement. At last, he opened out. "Say, nigger," he said, "if you don't take that sasser out of my way, darned if I don't spit into it!"

Nearly all great hotels, such as the Palmer House, have a separate side door by which ladies may enter and obtain access to the upper floors without coming in contact with the expectorating crowd in the hall. But at the railway stations and in the ordinary cars, ladies are constantly subjected to the nuisance, and it is perhaps well that habit has hardened them against it. Notices requesting "gentlemen" not to spit on the floors are freely displayed, but they are by no means universally obeyed. The neatest thing of this kind that I saw was hung up in the ticket office of one of the Minneapolis dep'ts. It read thus:—"Gentlemen will not, and others are requested not to spit on the floor."

The dining-room of the Palmer House is a superb apartment of vast dimensions on the first floor. It contains a whole army of waiters, mostly coloured, commanded by a full-blooded negro, of gigantic size and equally enormous importance, with a "diamond" stud of corresponding proportions in his extensive and faultless shirt front. He is a potentate of the first water, and his will is law throughout his kingdom (the dining-room). The room contains probably fifty small tables, each laid for six guests. The dark sovereign always keeps one eye on the entrance, and with a majestic sweep of his arm directs every guest, the moment he sees him enter, to the seat he desires him to occupy. The autocratic and peremptory way in which he orders the waiters about, and makes them "hurry up" by loud snappings of his fingers, is a sight to see. I was told that such a "boss" waiter as this is very often as great a tyrant to his employer as to his subordinates. He draws the pay of an English admiral, engages and dismisses his men as it pleases him so to do, and allows no interference, even on the part of his masters, with the management of his room.

MEN WITH MEMORIES.

But there is another official connected with this dining-room who is as remarkable in his way as the potentate himself. This is a man who stands at the door and takes charge of the hats of the guests as they pass in. He has a number of shelves on which he arranges these hats, on some system known only to himself; but whatever the number of persons in the room may be at one time—and it is often between one and two hundred—he never fails to hand back to each guest his right hat. I was a good deal interested in

these remarkable feats of memory. On more than one occasion, I made a pretence of appropriating another person's head-gear, but in each case he checked me and picked out my own. It appeared to be a point of professional honour with him to spot the right hat without aid. If he seemed to hesitate for a moment as if in uncertainty, and I made a movement as if to assist him, he instantly objected to be thus aided, and in a very few seconds handed me the right article. Some one who knew the man pretended to explain his secret to me. It was his habit, I was told, to form and retain a mental picture of each guest's face in association with his particular hat. By long schooling himself in this habit, he had gradually rendered himself the adept that he was. Whether this is the true explanation I am unable to say, but the faculty which the man has somehow contrived to develop is certainly a very remarkable one.

I may as well remark in this connection that I found a man with a similar faculty, similarly engaged, at the door of the dining-room at the Fifth Avenue Hotel in New York. This one assured me, with the most charmingly unconscious egotism, that he was at the head of the profession. I told him that I had seen the Palmer House hat man, and was greatly astonished at his feats. "Ah!" he said, with childlike innocence, "but he is not like me. Several gentlemen who know him have told me so. There is nobody like me in the country. I've been written about in your English papers!" In having been made the subject of remark in our newspapers, he apparently believed he had achieved immortality, and perhaps I might as well have told him that I intended to immortalize him a little further, supposing such a feat possible. It must be admitted that he and his Chicago brother are a pair of very curious phenomena.

HOW SOME AMERICANS DINE.

The American system of serving dinner in the great hotels is a very agreeable and convenient one, but it is shamefully abused. The bill of fare, which is handed to every guest, is usually so long and varied as to be perfectly embarrassing to a stranger. An Englishman is pretty sure first to order his soup or his fish, or both, and to take time to consider the subsequent order of his eating. This is the wisest plan, and is adopted by all who study decency and deprecate waste. But there are many frequenters of American hotels—possibly not all Americans—whose rule it is to order all they want at one and the same time. In doing this, they sometimes appear to exhaust the whole list. How the waiters manage to carry their orders out of the room without dropping some of the items out of their memories is more than I can understand. Perhaps the hat man at the door utilizes his spare time in giving them lessons in remembering, or, as a London "professor" oddly puts it, in "the art of not forgetting."

While the waiter is gone for his miscellaneous collection of eatables, the guest reads his paper or scoops out a melon. If he is impatient, he bids the head waiter "hurry up" things, and in due time his dinner comes. It is contained in about a dozen small oval dishes, which the waiter proceeds to arrange round his plate in the form of a semicircle. The plate is there as a matter of form, but I have often seen a diner get through his dinner without putting a morsel on it. The truth is, the man who orders in this reckless and wholesale fashion regards the dishes as so many samples, and decides which he will take when he has seen or tasted them. Looking critically round the semicircular array of dishes, he plunges either knife or fork into one of

them and carries a sample to his mouth. With a slight smacking of the lips, he thus "tastes" dish after dish; and as his samples are large, he has made some progress in the business of allaying his hunger before he has completed the circuit. As a rule, he does not complete the circuit at all. Having taken his samples of most of the sorts, he speedily clears two or three of the dishes whose contents most commend themselves to his taste, eats perhaps half of the contents of one or two others, and leaves the greater part either entirely untouched or only diminished to the extent of a good mouthfull. In an incredibly short space of time, he is "through" and hurrying towards the door, three-fourths of the food he ordered being left. What is done with the enormous quantities of good food thus thrown on the hotel-keepers' hands I do not know. I once ventured to suggest to an American that I supposed the negro waiters ate it. He regarded the suggestion as wildly improbable. "They eat it!" he said. "No hotel proprietor would dare offer it to them." Under these circumstances, the loss must be immense; and as the hotel people have to reckon on the wasteful propensities of many of their guests, their charges are necessarily higher than they need be. Thus a person who orders only what he wants, and eats what he orders, has the satisfaction of knowing that he is helping to pay for the good food wasted by others. This reckless waste was more marked at the Palmer House than at any other hotel I visited, and that is why I deal with the abuse under this heading.

"HOGGISHNESS" AT TABLE.

The men who display this recklessness are mostly vulgar people with plenty of money, and they manifest their vulgarity as much by the style in which they eat as in their ostentatious disregard of economy. The way in which some of them manage their "eating tools" is simply amazing, and nobody can dine near them in any comfort without trying hard to forget all the conventionalisms of decent society. I thought for some weeks that nothing could surpass the "hoggish" style (as the Americans themselves call it) of some of the men I saw at table at Chicago, but I was rudely awakened from this illusion the first time I sat down to a meal on board the *Germanic*. An unkind Fate, in the person of the purser, there placed me opposite a man dressed like a gentleman, who was clearly a German by birth, and who afterwards told me he was a New York lawyer. For sheer "hoggishness"—no other word is expressive enough—he was an easy first, as far as my experience has yet gone. He was left-handed, to begin with. He therefore held his fork in his right hand, and this he did by taking it in the full grasp of his closed fist, just as one clutches a dagger. It was thus perpendicular with his plate. With a stabbing motion he pinned his meat to the plate, clumsily tore off a piece as large as the blade of the knife, and with the knife shovelled it into his mouth. A slice which nearly covered his plate, together with a proportionate quantity of vegetables, thus disappeared in about half a dozen great gulps. Nothing that could possibly be balanced on the blade of his knife ever went to his mouth by any other means. Being naturally through each course before anybody else, he filled up the time by picking his teeth and combing his moustache with his fork, and doing his best to clear the table of all the cakes, grapes, nuts, and other elements of the dessert that happened to be within reach. He ordered almost everything mentioned in the bill of fare, and course after course was

disposed of in the barbarous but expeditious manner already described. Every time his plate was empty, he looked round for other worlds to conquer—i.e., for other dishes to clear; and if there happened for the moment to be nothing within reach, he amused himself by calling his neighbours' attention to his fine set of teeth, by noisily rattling them together and turning his head from side to side in a peculiarly knowing manner. I and my friend watched this man's first performance with speechless amazement; and when it was over, we comforted ourselves with the reflection that, after such a huge and miscellaneous stuffing, he could not possibly turn up again for several days. As a matter of fact, he did not reappear for 24 hours, and on some subsequent occasions he managed to stow away enough to last him (or to sicken him) for still longer periods. I noticed, on the second day of the voyage, that a young man who had been at first placed alongside this champion glutton had managed to secure a seat at another table, and that his own chair was unoccupied. Next time I met him on deck, I hinted to him that possibly I could guess why he had moved.

"Well," he said, "who could sit alongside that hog? I told the purser at once that I could not, and asked him to find me another seat. He declared there was no other available. I then told him he would have to send all my meals to my room, for I should be sure to be sick, and be driven to my berth, if I attempted to sit where he had placed me. Hearing this, the purser soon found me another place."

I suppose a man who outrages all the proprieties in the way I have tried to describe either fails to observe how other people conduct themselves, or considers his fashion superior to theirs. In the case in question, the barbarian had literally nobody to keep him in countenance. A bronzed and rugged Oregon farmer, who sat near him, came to table regularly in a very touzled condition and without either collar or neck-tie; but, clumsy as he was, his mode of eating was elegance itself beside that of the German New Yorker.

But mark how inconsistent a thing human nature is! When this man had recovered from the effects of his heavy feeds, he was trotting about the ship wearing tightly-fitting kid gloves, and looking otherwise like a gentleman; or he was sitting in some quiet corner diligently reading a book. I believe he neither drank, smoked, nor gambled, and he certainly talked like an educated person. I had several chats with him after my first sensation of disgust had worn off, and I was immensely puzzled at the contrast which I discovered between his ordinary manner and his unspeakable "hoggishness" at table.

CONCLUDING REMARKS ABOUT CHICAGO.

But once more my subject has carried me far away from the Palmer House, Chicago, and I must needs return and complete what I have to say about that splendid caravanserai. I have before remarked on the small amount of drinking which appears to be going on at the great hotels. This is very marked at the Palmer House. Considering the amount of excitement always prevailing, and the extent to which smoking and expectation are always going on, the consumption of strong liquors is wonderfully small. The bar does not intrude itself on public notice. It is invisible from the great hall, and I never saw more than two or three persons "liquoring up" at it at one time.

The best bed-rooms at the Palmer House were the largest and most complete I met with anywhere. Each room was beautifully carpeted and furnished, and was

provided, in addition, with a bath-room and w. c. to which the occupant alone had access. Like the marble throne in the boot-room, all this convenience and grandeur had, of course, to be paid for.

It goes without saying that an enormous, go-ahead place like Chicago possesses a prosperous and enterprising newspaper press. Two or three of its dailies are among the most valuable newspaper properties in the country, and the smartness with which they are conducted is unsurpassed. I must content myself with a single illustration of their enterprise. When the revised version of the New Testament reached New York, every word of it was instantly telegraphed on to one of the Chicago papers, which next morning issued it complete in the form of a supplement, thus stealing a march of 24 or 48 hours on its rivals. I have seen a copy of this remarkable supplement, and I am bound to say that it was a marvel of accuracy and clearness. This feat must have cost an immense sum of money, but it produced in the public mind precisely the effect which the conductors of the newspaper aimed at, and they have no doubt reaped their reward long ere this.

I have already referred incidentally to the raising of the level of part of the city, but the feat was so remarkable that I must add a few details. The site on which the older portions of the city were built was barely above the level of the lake, and the inhabitants were much troubled at times by the irruption of water into their lower floors. Two remedies for this state of things suggested themselves. Either the level of Lake Michigan must be lowered, or the buildings must be raised. As no mode of lowering the lake occurred even to the mind of Chicago, it was decided to raise the buildings. And this was slowly but successfully accomplished. Numerous screw jacks were placed under each house in turn, and it was gradually lifted to a height of 5, 10, or even 14 feet above its former level; but so slow and regular was the movement that the structure sustained no shock. The operation was imperceptible to the inmates, and everything went on indoors precisely as if nothing particular was happening. Chicago people are fed so regularly on the marvellous that they probably would have said nothing particular was going on.

The origin of the word "Chicago" is a matter of dispute. Some say it was derived from the Indian word for "skunk," the stinking polecat-like beast so often met with in the States. Others say it means "wild onion," while others, again, contend that it was derived from "che-ague," the Indian word for thunder, or the voice of the Great Spirit. Whichever interpretation is the correct one, the name clearly indicates something strong. The western Americans give a very broad pronunciation to the word. In the mouths of many, it sounds almost as if it were spelled "She-caw-go." The broad a sound is heard similarly in many other names. "Omaha" is, for instance, pronounced "Omahaw," while "Utah" is often turned into "Utauw."

I went both to church and to the theatre at Chicago—I do not mean on the same day, though I might have done that; for some of the theatres are regularly opened on Sundays, as they are in San Francisco and other western cities.

The church was a large and handsome one, the whole of the seats gradually rising from front to back, tier above tier, like those of a theatre. Every inch of the floor—aisles, pews, and stairs alike—was beautifully carpeted, and not a footfall was heard as the worshippers made their way to their seats. The church was

evidently patronised by many wealthy people, who contributed largely towards its maintenance. The preacher delivered a very able and thoughtful address from the words:—"If any man will do his will, he shall know of the doctrine, whether it be of God." I must not begin to report sermons at length, but I may say this—that I gathered from that particular sermon that religious orthodoxy is very much a matter of longitude. What is orthodox in England is not necessarily sound doctrine in America. This Chicago preacher, for instance, suggested, as his text no doubt compelled him to do, that there must be ethical obedience—a clean life, in fact,—before there can be a clear discernment of spiritual truth. Judging from what I sometimes hear in England, this is rather a turning upside down of things.

I went to the theatre mainly because I found that a drama was "on" there which had long been running in London, and which I had particularly wished to see. That piece was "The Silver King;" and as Paul Denver, its hero, is represented as going to the West and making a fortune out of silver mines, it was, so to speak, at home on the boards of an American theatre. I must no more attempt to report stage plays than sermons, but I cannot refrain from advising anybody who ever has the opportunity of seeing "The Silver King" on no account to lose the chance. The drama is a charming and affecting one, containing not a word or a hint to which the most squeamish can possibly object. The moral, moreover, is excellent. The terrible consequences of drunkenness, gambling, and vicious habits generally, are portrayed with a vividness and power such as no mortal preacher ever approached by means of unaided speech.

I have said enough, I think, to indicate that the people of Chicago fully appreciate their importance in the world. Some good stories are current in illustration of this, and Mr. Marshall, the author of *Through America*, has collected a number of them. He says that on one occasion a certain Chicago man visited the Eastern States for the first time. On his return, he was asked what he thought of New York. "Waal," he said, "I guess the place is too far away from Chicago to do any particular amount of business."

The Rev. Samuel Manning says a Chicago man remarked to him:—"Our city is the biggest thing on the planet. We've had the biggest fire. We lifted the city five (2) feet out of the mud. We made a river run up hill; it wouldn't go where we wanted it, so we turned it end and about. And it's the only city on earth every inch of which is covered three inches deep in mortgages!"

It is, I believe, quite true that Chicago was largely built, and, after the fire, rebuilt, by means of money from New York, Boston, and other eastern cities. But the East evidently had unlimited faith in the city and its future, or it would never have advanced such prodigious sums.

But while Chicago pokes fun at the East and its old-fashioned ways, the East returns the compliment by chaffing Chicago. Here, for instance, is what the *Boston Herald* said not many years ago:—"Chicago is a large city, a smart city, and a city with a fair degree of confidence in itself, but its total valuation, which is 123,000,000 dollars for all Cook County, is equalled by some wards in Boston. In fact, Boston could buy all Chicago with its loose change, and have enough money left over to take every man, woman, and child to the circus. We do not say this in a boastful spirit, for Boston people care little about material things; but simply to make our own people

content with what little dross has stuck to them while studying theology, philosophy, and ethics."

In this paragraph the *Herald* administers a sly poke to its own citizens, who profess to regard intellectual and moral culture with much more favour than mere money-getting, but who, nevertheless, manage somehow to sweep in the dollars at a rate which ought to satisfy Mammon himself.

A MODEL CITY.

Just beyond the outskirts of Chicago on its southern side stands the new and wonderful little city of Pullman. I beg to remark at the outset that, so far as I know, there is no connection between that place and *Pulman's Weekly News*; although, by the way, it is quite possible that the famous railroad-car builder after whom the city is named is a descendant of some branch of the Pulman family of Devon and Somerset. He certainly puts a second / into his name, but that counts for nothing.

I need hardly explain, after what I have said on the subject, that Mr. Pullman was the founder, and is still the moving spirit, of the great Company which builds the Pullman sleeping and parlour cars, and runs them, under arrangements with the various railroad companies, over almost every important line in the country. The building and repairing of the vast quantity of rolling stock belonging to the Pullman Car Company would, of itself, constitute a gigantic business; but the Company's operations extend even beyond this. It carries on the business of general car-builders for the whole American continent, and has even exported a good many of its wheeled palaces to this country and the countries of Continental Europe.

The Company has for many years had more than one great factory at work. There is one at Detroit; there is (or was) one in Chicago itself; and I believe there are smaller establishments, chiefly for repairs, in other cities. But, some years ago, Mr. Pullman conceived the idea of removing the greater part of his army of workmen out of the great cities, and locating them in a town built entirely on plans of his own. He was anxious to begin at the very beginning, and to show the world what a factory and a factory town ought to be like. And the scheme thus conceived was carried out with a promptitude, a completeness, and a success which appear little short of miraculous. A clear site was secured on the shore of a tiny lake (Lake Calumet), about ten or twelve miles from the centre of Chicago. The site was flat prairie land, and the Illinois Central Railroad ran close alongside it. At a certain date in 1880, this site was in the state in which Nature left it. Within two years—I think I might say within eighteen months, but I prefer to err on the right side—a model city of 8,000 inhabitants had sprung up—a city which is to-day without a rival among industrial towns, in the comfort, not to say the elegance, of its homes, in the perfection of its sanitary appliances, and in all the institutions that tend to create and perpetuate a healthy, industrious, educated, and moral community. Alongside the town stands a huge assemblage of buildings which ranks among factories as Pullman itself ranks among cities; and in this factory almost every able-bodied man in the city finds profitable employment.

Alighting at Pullman Station, the traveller from Chicago finds himself in a new world. The station itself is but the beginning of novelties. It is no mere ugly wooden shed, with unlovely surroundings, like

too many of the wayside depôts. It is a solid, handsome building of brick, with real claims to architectural beauty. It is clearly a part of the town, designed to harmonise with the perfect whole. Its beautiful setting of turf, flower beds, and shade trees prepares one for what follows.

Leaving the station behind, the traveller finds himself advancing eastward along a fine, wide boulevard, on which the roadway and the sidewalk are separated from each other by strips of turf, flower-beds, and trees which are young at present, but which will constitute a grand avenue at some future time. The bedded-out plants in the borders appear to be quite safe under the guardianship of the inhabitants. On the traveller's left are the factory buildings, and a more striking contrast cannot be conceived than that between this huge but beautiful block and the typical factory of Yorkshire or Lancashire. Even Mr. Ruskin himself would admit, if he could anyhow be dragged into Pullman, that ugliness is not necessarily allied with modern utilitarianism. The architecture of the great car factory might possibly fail to commend itself entirely to his critical taste; but he would be at least compelled to confess that the builders had done their best to avoid the hideous ugliness which appears to be the special study of most of the designers of large manufacturing premises. But were he to look from the factory to its surroundings—to the stretches of emerald turf, the flower-beds, the dense groups of shrubs, the trim and well-kept walks, which engirdle the buildings, and then were to think of Manchester, Sheffield, and Leeds, and of the cinder-heaps and general unloveliness which grimly surround their hives of industry, he would, I am sure, be impelled to declare that, even though America contains no Venice and has never given birth to a Turner, it is not so far gone in the worship of Mammon as to care nothing for the beauty of the temples in which it practises its rites.

The great car factory is not surrounded with jealously-guarded walls. Its gardens and other free spaces are open to the public, and the public apparently walk in and out without let or hindrance, and without asking anyone's permission. To secure access to the whole of the work-shops a permit of some kind is necessary, but the most interesting feature of the whole establishment is open to all comers. Those who remember the published accounts of the great Centennial Exhibition at Philadelphia can hardly have forgotten how much was said about the pair of wonderful engines which drove all the moving machinery of that gigantic show. They were called "Corliss" engines from the fact that they were built by the celebrated engineering firm of that name. When the Pullman factory was built, the Pullman Company bought these engines and erected them there, to drive their vast collection of machines and tools. And there the giants toil away day by day, in a palace worthy of them, of their beauty, and their fame; and this palace is open to all the world. Seats are provided on which visitors may sit at their ease and watch the stately movements of the engines as long as they please. The doors stand wide open, and people walk in and out at their pleasure. These engines are said to be the largest ever built on the beam principle, and their exquisite finish is as remarkable as their size. If they were of burnished silver throughout, they could hardly make a more brilliant show. It is, indeed, difficult to believe that they are not at least electroplated. The engine-house is, as I have said, worthy of them. The engines might, I should say, receive a

thousand visitors at once, so immense is the place. It is, moreover, the perfection of neatness and cleanliness. The Chicago man who squirts his tobacco juice freely about the marble floors of the Palmer House is apparently shamed into decency by the very sight of this engine-room. There are plenty of spittoons about, and each one stands exactly in the centre of a square of floorcloth, so that the exquisite cleanness of the floor shall not suffer at the hands of bad marksmen. I never before saw any human contrivance which reminded me so forcibly as these majestic engines did of the slow, noiseless, resistless operations of Nature.

The city of Pullman is a worthy companion to the great factory to which it owes its existence. It draws from the Pullman Company's works its gas, its water, and (as regards part of the town) its heat, steam being distributed from the factory through some of the streets, and "laid on" to the houses exactly as water is. The drainage is as perfect as science and money can make it. The streets are of immense width, and have wide strips of turf and avenues of trees between the footways and roadways. The houses are not crowded together in endless terraces, but are, where not actually detached, divided into small groups. Sunlight and air, therefore, penetrate freely everywhere. Anything more unlike the crowded, grimy streets in which the artisans of our great towns mostly live it would be difficult to conceive. The shops and the private houses are kept carefully apart. Indeed, all the shops I saw were grouped together under cover, in one place in a kind of market and in another place in the form of an arcade. The inhabitants are thus able to do all their shopping under cover and at one spot, without running about from one part of the town to another.

The recreations of the people have been fully provided for. There is a kind of park, where the national game of baseball can be played. Close to this is a racing track for athletic sports, overlooked by an immense covered stand capable of accommodating two or three thousand people. Further on again is the shore of Lake Calumet, and here a boat-racing course has been cleared, having another huge stand for spectators. A public bathing-place on the lake shore provides for all who wish it the opportunity of learning to swim. In the arcade already referred to is a beautiful little opera house, where the Pullmanites can witness theatrical performances without the trouble of going into Chicago for the purpose. The public schools and other educational establishments are models of their kind.

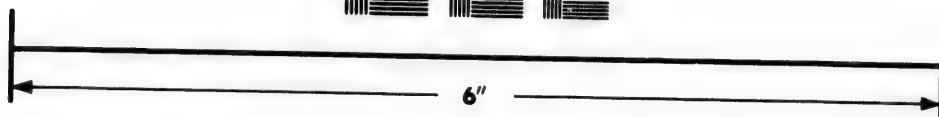
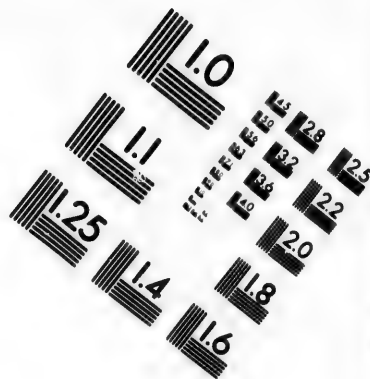
Wood is but little used in the construction of houses in Pullman: and, as I have said, the streets are wide and the buildings a good deal detached from each other. All serious danger from fire would, therefore, appear to be obviated. There is, nevertheless, a fire brigade, possessing a station which, like everything else in the city, is as perfect as money and ingenuity can make it. We visited this station and had an interesting chat with the fireman on duty. As this station was, in all its main features, similar to those which I saw in other cities, I will give a brief description of it.

The station was open to the street, and a steam fire engine stood inside, ready to start at a few seconds' notice. On each side of the engine was a stall or loose box for a horse. The stall on one side was labelled "Jim," that on the other side "Jan," and the four-footed bearers of those names stood with their heads towards the door ready for instant action. A touch of

a lever threw open the doors of both stalls, and, without a word of command or guidance, the horses leaped forward into their places, one on each side of the pole of the engine. The very simple harness belonging to each horse was hanging above it, and a pull at a cord lowered it into its place on the animal's back. Two or three buckles were fastened, and the engine was ready to start. The time occupied in these preparations was counted by seconds. It was customary, at a fire station which I afterwards visited at Richmond, Indiana, to go through these performances once every day, exactly as the clock struck twelve, and a record was kept of the time occupied. In that case, after the horses had stood in harness a few minutes, they were liberated and sent off to the back of the premises to feed. They were no sooner free than they turned and skipped off dinner-wards as merrily as children just released from school. This association of oats with duty is no doubt a wise one. The horses have got to know by long experience that the daily call to duty is, in nineteen cases out of twenty, followed by a feed, and self-interest induces them to leap forward promptly into their places the moment their stalls are thrown open.

The man in charge of the Pullman station begged us to note that, whenever he and his comrades were called to a fire at night, they always start off to it *without waiting to come downstairs*. This statement appeared rather paradoxical until he explained himself. He pointed out a polished brass pole running up from the ground floor through a hole in the ceiling. The firemen slept upstairs (with some of their clothes on, I suppose), and the moment they were called they slid down the pole. The fireman explained that this was a much more expeditious process than coming downstairs, and in the case of a building two or three storeys high I suppose there can be no doubt of it.

We cross-examined this fireman on another subject not necessarily connected with his occupation. We had discovered that the Pullman Company had done their best to prevent the sale of intoxicating liquors in any part of their model town. The tenant of every house in the place holds his premises on the express condition that he will not sell liquor on his premises, or allow it to be sold; and we were assured by some of the inhabitants that any breach of this agreement was followed by immediate expulsion from the town. Being curious to know to what extent the Company had actually succeeded in their object, we questioned the fireman closely as to whether liquor *could* be got in the place. At first, he was extremely reserved and would know nothing; but he ultimately thawed so far as to inform us, partly in words and partly by winks and gestures, that, as a matter of fact, those who knew how to go about the business *could* get what they wanted at the beautiful "temperance" hotel, the only one in the city. We did not test the accuracy of his information; but I am disposed to think, from all I heard elsewhere, that the regulations are rarely violated, and that the liquor traffic is virtually excluded from the town. But, unfortunately for the good intentions of the Company, another township, which knows neither G. M. Pullman nor his temperance zeal, has sprung up within a few hundred yards of the great factory. Saloons abound there, and those Pullmanites who are determined to have their liquor can get it by taking a short walk across the imaginary line which separates the two towns. The Company, however, no doubt think they have done a good work in preventing the throwing of temptation in the way of their workmen as they walk about their own city.



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Some weeks after my visit to Pullman, I fell in with a gentleman who knew the place well, and who explained to me that Mr. Pullman's otherwise wise and beneficent scheme had been marred by two serious mistakes. In the first place, no working man in the town can ever hope to be the owner of his own house. So determined is Mr. Pullman to retain entire control over the place, and thus to ensure the carrying-out of his regulations, that he will not, under any circumstances, consent to the sale of a single house. But the very flower of the working men in America, like their brethren in England, have a hankering for a home which they can call their own; and the result is that many of them refuse to live in Pullman, where they are necessarily tenants-at-will. This is a drawback, no doubt, but I presume that Mr. Pullman's Company, seeing they cannot have all they want, have deliberately made some sacrifice in the quality of their staff for the sake of continuing masters in their own city.

A second mistake, as my informant put it, related to religion. Mr. Pullman is, it seems, a somewhat heterodox person, who has not much faith in either the churches or the clergy. He, nevertheless, built a beautiful church in a central position, and, being very impartial and latitudinarian, he offered to "rent" it—to use the American phrase in that case made and provided—to any denomination which chose to pay him a moderate return on the cost of the building. If the Pullmanites were all of one way of thinking, they would easily raise the rent; but, as a matter of fact, they are pretty much like the people of an English town of the same size—that is to say, they are split up into a dozen or a score of sects, differing from each other on the most vital and tremendous questions, from the length of the Devil's tail upwards. The result is that no one sect is strong enough to rent the beautiful church, and it is consequently generally closed, while the various congregations are worshipping in all sorts of odd holes and corners. One would suppose that three or four of the larger congregations might very well rent the church between them, and hold their services at different periods of the day, just as the Catholics and Protestants do in a few extra tolerant and liberal places in Switzerland. But this plan has not been thought of or has been found impracticable, and so Mr. Pullman's outlay on his church brings no dividend.

I hope I have now said enough about Pullman to induce any of my readers, who may happen to be going within a day's journey of it, to make a point of spending a few hours in examining it for themselves. It is, in its way, the most remarkable place in the world.

A GREAT RAILWAY.

My travelling companion and I left Chicago by the Chicago and North Western Railway; and as that line is one of the most important, most enterprising, and most prosperous of all the great railroads which centre in Chicago, I will give a brief description of it, in the hope of conveying some idea of what a great American railway is like.

The Chicago and North Western bears the same relation to Chicago as the London and North Western and the Great Western together bear to London. That is to say, it stretches its long arms away to the North, the North-west, and the West. Of course, I do not mean that, as a trading concern, it is equal in importance to our own two greatest companies combined. That is far from being

the case; but it is a fact that it works a greater mileage of lines than our North Western and Great Western together. Its mileage now considerably exceeds 5,000 miles, and is constantly increasing as the vast prairie districts which it traverses become settled. A mile of single line across a newly-settled district in the West is, of course, a very different thing from a mile of double or quadruple track through the suburbs of London or the busy manufacturing districts of central or northern Britain. The two things are not very much alike either in the amount of capital represented or in the value of the business done. But after all, when one remembers that the great city from which the Chicago and North Western radiates is itself the creation of a single generation, and that many of the prosperous towns which are linked to it by that line are but of yesterday, the existence of such a railway system, owned or controlled by a single corporation, must be regarded as an amazing fact. And one's wonder is enhanced when one remembers that the North Western is only one of some dozen or more great railway systems which own Chicago as their centre, head-quarters, and mainstay. For, great as the North Western is, it has no monopoly of the traffic to or from any important centre of trade. It was the first company to reach the Missouri River, and thus to complete the second link in the chain which now binds the Atlantic and the Pacific together. But two other companies have since constructed parallel lines from Chicago to the Missouri, and the competition for the western traffic is fierce and incessant. The North Western has to contend with a similar competition for the traffic to Milwaukee, St. Paul, Minneapolis, and Manitoba. To the east, south, and south-west of Chicago, a dozen other companies fight hard for the business; but with their competition the North Western is in no way concerned. Its lines are all to the north or the west of Chicago, as its name indicates. The States and Territories it serves are Wisconsin, Iowa, Minnesota, Dakota, and Northern Illinois. To the westward, as I have already said, the North Western runs to the Missouri, a distance of 490 miles, terminating at Council Bluffs, opposite Omaha. The two towns are connected by a fine bridge over the river, which is used by the passengers of all the companies which meet at this important point. Towards the north, the North Western throws out another long arm, nearly 600 miles in length, which skirts the shores of Lake Michigan and Green Bay (part of Michigan), and terminates at two or three points on Lake Superior. A more important section is that which gives direct access to the prosperous and rapidly-growing twin cities of St. Paul and Minneapolis. This, also, is over 400 miles in length. At a place called Elroy, on this section of the railway, a line of immense length diverges to the left and strikes due west across the prairies of southern Minnesota and Dakota. Its termination is (or was a few months ago) on the Missouri River, at a place called Pierre, 781 miles from Chicago. From this point, stage coaches run on to the Black Hills, on the frontier of Wyoming; and the railway itself will certainly be continued to that point before long, if, indeed, the work has not already been accomplished. Another important section of the North Western is a line which connects St. Paul and Omaha, by way of Sioux City (pronounced as if spelled Soo City). This section is, I believe, owned by a different company (the Chicago, St. Paul, Minneapolis, and Omaha), but this company is in close alliance with the North Western, and the lines of the two constitute virtually one system.

The five trunk lines I have described constitute the main arteries of the North Western system ; but, like main lines in England, they are bound together at numerous points by a large number of cross and branch lines, which accommodate every city and town of any importance in the vast district occupied. A railway map of Wisconsin, Iowa, and Illinois is, indeed, not unlike a similar map of Lancashire and Yorkshire, so complete, apparently, is the network of lines. As a matter of fact, the lines are, of course, less numerous, in proportion to area, in these Western States than in our own manufacturing districts. In comparing maps, it is necessary to compare their respective scales also. There are not in existence such detailed maps of the States as we have of our English counties. Our maps are on a large scale, theirs on a small one.

The financial position of too many of the great American railways is unsatisfactory in the extreme. In numerous instances, irregularities on an enormous scale have reduced the value of the original stock to *nil*. Clever but unscrupulous adventurers have obtained the supreme control, and have deliberately sacrificed the interests of the proprietors to the one object of feathering their own dirty nests. Capital has been "watered," by the more or less dishonest issue of new stock, until it has been too diluted to be worth owning. In not a few cases, the original shares have ceased to have any real existence, but have been carefully kept in a state of artificial vitality, to serve as counters in stock-exchange gambling, and in other shabby operations by which the smart ones are accustomed to swindle the greenhorns. The result is that the American share-list now contains the names of only three or four great railroad companies whose ordinary shares are above par. The Chicago and North Western is one of this very small number. Although at the present time all American railroad securities are suffering from the effects of one of the severest financial crises ever experienced in the States, the North Western ordinary shares stand at 105, and its preference shares at more than 130. These figures represent, in the present state of the market, a remarkably strong position. The North Western is, indeed, like its British namesake, a great, successful, and well-managed line, both financially and mechanically. As a sound concern, it appears to have few equals in the States.

A COUNTRY FOR AGRICULTURAL EMIGRANTS.

Judging from what I saw and heard, I am disposed to think that the North Western and its allied lines pass through some of the most eligible districts in which agricultural emigrants could possibly settle. Both the North Western and the St. Paul, Minneapolis, and Omaha Companies have still immense areas of fertile lands on sale, at prices which to an Englishman appear ridiculously small—that is to say, from about a guinea an acre upwards. Most of these lands are prairie. This means, of course, that they are almost entirely destitute of timber. They are covered, for the most part, with grass, much of which is good for feed. The land can be broken up and sown as soon as the settler gets upon it. In this respect, settlers on the prairie have an advantage over those who go into the forest, where the land has to be cleared of its huge "weeds" by laborious processes of which I have already tried to convey some idea in my account of a backwoods city in Michigan.

But it is only fair to point out that all the advantages are not on the side of the prairie settler. The settler in the forest may have to remove the trees, but then that very process supplies him with materials for his house and other buildings, his fences, and his fuel. Moreover, if he is a wise man, he allows parts of the forest to remain. Patches of woodland here and there are useful, not only as permanent sources of fuel, but as necessary elements in the landscape, as shelters from the wind, and, generally, as wholesome modifying influences with regard to climate and health. The prairie settler, on the other hand, has no trees or tree stumps to reckon with ; he can put in his plough at once. But for that very reason he must buy the materials of his frame house at a distance, must either do without fences (as no doubt he very well can in many instances) or buy wire, and must purchase coal or wood fuel at a high price. I believe the railway companies render all the aid they can to settlers by conveying the materials for their frame houses and barns at a very low rate.

I do not know enough of agriculture to offer a positive opinion as to whether I would myself rather begin life again in a forest or on a prairie. I have no settled opinion on the subject, but I have, to the best of my ability, pointed out the chief advantages and disadvantages of both. One piece of advice I can offer to emigrants with safety—*Never buy land without first seeing it*. This may seem superfluous advice, but it is not. Millions of acres have been bought "off the map." That is to say, the settler has been shown a nicely-coloured map, with the counties, the sections, and the square miles all marked out with the mathematical precision of a chess board, and he has simply bargained for such-and-such square blocks as there set out. Readers of Dickens will remember that this was how Martin Chuzzlewit bought the dismal swamp which the astute land agent had christened Eden. But a sale of this sort is not necessarily due to conscious dishonesty. The land commissioner of one of the companies told me that vast areas of the railway lands had never been accurately surveyed. All he knew was that his Company was entitled to a certain belt of territory as represented by the numbered squares on the map ; but whether any particular square consisted of quaking bog, of lake, or of good solid soil, was in many cases more than he could answer for. He said he always advised settlers to see the land they might have a fancy for before they completed their purchase.

It is, I think, certain that the great majority of agricultural emigrants prefer to settle in the prairie States. The rate, for instance, at which Dakota is filling up is marvellous. This is the Territory of the vast wheat farms of which we have heard so much. I was told of one farmer (a Scotchman, of course) who has 20,000 or 30,000 acres under the plough, all in one compact block. It is said that on such a farm as his a dozen or a score of reaping machines may be seen going all at once in what is virtually one immense field. And this mention of reaping machinery reminds me of a fact which illustrates very forcibly the rapid settlement of Dakota. On my return from the West, I was introduced to the head of a great implement manufacturing firm at Richmond, Indiana. This gentleman (a Quaker from Yorkshire) told me that his firm had just extended their operations to Dakota, and that their agent there had cleared 15,000 dollars (over £3,000) commission on his first year's sales. I am afraid this statement will excite envy among implement agents at home, and result in

a rush of that class of people to Dakota. In that case, I am afraid £3,000 a year will never again be made.

Dakota is still only half-developed politically. It is, as yet, only a Territory. But the inhabitants say it ought to be a State, and *shall* be a State; and when I was in the neighbourhood last year, they were threatening that, if Congress continued much longer to refuse to advance them to the coveted rank, they would secede from the Union and set up in the governing business on their own account. This, of course, was all buncombe. A few thousands of farmers, scattered over a Territory as large as Great Britain, are hardly likely to attempt a movement similar to that in which a dozen great States failed so ruinously less than 20 years ago. The Dakota people are, however, out at elbows with the Federal Government over more than one question, and the dispute last autumn assumed somewhat the character of a farce. When the Territory was first settled, and for some time after, the population was confined almost entirely to its south-east corner, and a place on the Missouri, called Yankton, in that corner, was selected as the capital. But the recent opening of the Northern Pacific Railroad and of the western extensions of the North Western and other lines has led to a very rapid development of the central and northern parts of the Territory. It soon became obvious that some more central city than Yankton would have to be adopted as the capital, and last autumn the order went forth that Yankton should transfer its honours to Bismarck, a new and thriving place in a commanding position—viz., at the point where the Northern Pacific Railway crosses the Missouri River. The State officials, who had no doubt shaken down into comfortable quarters at Yankton, did not relish the order to transfer themselves and their red tape to a newer, colder, and altogether less pleasant place, several hundreds of miles further up the river. They, or most of them, accordingly ignored the order, and went about their business as if nothing had happened. When I left the country in October, the dispute was still unsettled. Bismarck was the legal capital, and some of the territorial business was being transacted there; but the majority of the officials stuck firmly to Yankton. For aught I know, they may be there still.

Another district which is being rapidly settled is north-east Nebraska, the region lying between the Missouri and Platte Rivers. The increase of population and the growth of towns in this locality are amazing. The district has only lately been connected with Omaha and Sioux City, the principal cities in the neighbourhood, by the opening of the Nebraska section of the Chicago, St. Paul, Minneapolis, and Omaha Railroad. I cannot better give an idea of the rate at which towns grow, and the promptitude with which enterprising journalists supply them with newspapers, than by quoting the following from the *Hartington Herald*, a brand-new paper published at the brand-new city of Hartington, Cedar County, Nebraska. The *Herald* says:—

"This paper, commenced at Hartington a few weeks ago and before the first building in the town was completed, has since endeavoured to keep step with the remarkable growth, energy, and improvement of its birth-place. The *Herald* is a large, 8-page, 48-column paper; it is published weekly; it is the official organ of the town and county, and enjoys a patronage from subscribers and advertisers which is flattering and encouraging. It is devoted, generally, to news, literature, and good morals, and most especially to promoting the best interests of Hartington and Cedar County. With its magnificent inducements of fertile

lands, unfailing streams, and healthy climate, Cedar County's present population of 4,000 will be doubled within a year. Its principal town, Hartington, now ten weeks old, has already 500 citizens. Such rapid growth, though unprecedented outside of western mining regions, is warranted by its being the business centre and stock and grain market of a wide extent of country. Already its business is greater than in many towns three times its size and at least 50 times its age. To the task of assisting to bring into notice this live, growing, and energetic town, and its unrivalled, but at this time partially-developed county, the *Herald* takes pleasure in devoting itself."

MILWAUKEE.

TORNADOES AND HOTEL FIRES.

Milwaukee is the largest city in the State of Wisconsin, but it is not the state capital. The honour of filling that post belongs to Madison, a smaller but more centrally-situated place. Milwaukee is in many respects similar to Chicago. Like its great neighbour, it lies on the western shore of Lake Michigan, at the mouth of a small creek called the Milwaukee River. This creek, like the Chicago River, is made up of two smaller streams, which unite only a short distance from the mouth. The trade of Milwaukee is, moreover, very similar to that of Chicago. The same causes which created the larger city gave birth to the lesser also.

The distance from Chicago to Milwaukee by the North Western Railway is 85 miles. The fine skirts the coast of the lake the greater part of the distance, passing first through the beautiful northern suburbs of Chicago, which straggle away many miles along the shore towards the north, and then several independent towns, of which Racine appears to be the principal. The mention of Racine, by the way, supplies me with a text for a few remarks on tornadoes. A month or two before I passed that city, it had been visited by one of these terrible calamities. The track of the hurricane through the outskirts of the town could still be traced by means of a belt of new or newly-repaired frame houses. The tornado appeared to have swept straight down from the centre of the State towards the lake, and I could not help thinking what the consequences would have been if it had passed over the centre of Chicago or Milwaukee, instead of through the suburbs of a comparatively small place like Racine.

These terrible natural phenomena are, it must be admitted, a serious drawback to the pleasure of life in the Western States. It is not that they actually affect any considerable part of the total area of the country; for though their course may be many miles in length, it is usually very narrow—sometimes, indeed, less than a quarter of a mile. The suffering they cause is mainly due to the dread they inspire and keep alive in the breasts of thousands who never see the reality. It is the fear and expectation that the thing *may* happen which perpetually torment the nervous and timid inhabitants of the districts most frequently ravaged. This attitude of constant expectancy is torture to a certain class of minds.

A Londoner once appealed to the law to compel a neighbour to get rid of a cock whose crowing was declared to be a nuisance. Pressed by the owner of the bird, he was obliged to admit that it did not crow, on an average, more than three or four times in an hour. The defendant triumphantly asked if one crow every quarter-hour, on an average, could be regarded as an intolerable nuisance. The complainant replied that the crowing itself was not so much a cause of suffering as his suspense while waiting for the next crow. In the

same way, the lives of thousands of people in the Western States are embittered at certain seasons by the thought that at any moment a tornado may burst upon them. They are, indeed, "waiting" for it. Not one in a thousand of those who thus live in dread ever experience the object of their apprehension, but their mental suffering is none the less real. The truth, of course, is that a tornado is a calamity of a kind which deeply impresses the imagination, like an earthquake, or a forest fire, or any other phenomenon in which supernatural forces, or what the unscientific mind mistakes for such, are called into action. Nothing is, to the ignorant, more suggestive of the supernatural than a great tornado. If anyone supposes that the American papers systematically exaggerate the extraordinary doings of these local hurricanes, he is mistaken. Exaggeration is often impossible. Those who have never seen any more violent disturbance of the atmosphere than a winter or equinoctial gale in England can form no conception of an American tornado. The two things are, indeed, totally distinct. The tornado partakes somewhat of the character of a waterspout. It possesses the same spiral motion—the same amazing power of sucking up whatever comes within its influence. It exerts not only an enormous horizontal force, but also a lifting power of an almost incredible character. Hay-stacks, farm implements, household furniture, cattle, and human beings are picked up, carried a certain distance through the air, and then dropped in a more or less damaged condition. Mr. Howells, the well-known novelist, with whom I had some talk about these terrible visitations, told me in all seriousness that a friend of his once saw a shower of farming utensils, parts of waggons, and articles of furniture fall apparently out of a clear sky. They had been picked up by a tornado a short distance off, and had been dropped as soon as the sucking power had exhausted itself. A day or two after we left Minnesota, a section of that State was visited by one of the most terrible and fatal tornadoes on record. In this case, the air fiend, as the American papers called the invisible agency, lifted a moving passenger train from the rails, and made a perfect wreck of it. The loss of life was terrible, and the scene one of the most extraordinary ever witnessed. A neighbouring city (Rochester, I think), consisting mainly of frame buildings, was almost entirely razed to the ground. As may be readily supposed, I read the details of this awful catastrophe next day with absorbing interest, but I omitted to note the number of lives lost and the amount of material damage done, and I am afraid to supply the figures from memory lest I should be accused of exaggeration.

A man or woman who is capable of calculating probabilities will not be deterred from settling in the West solely through dread of the tornado. After all, the chances are a thousand to one that any particular settler will live and die without suffering in the smallest degree from such a calamity; and that is an amount of assurance with which, in many other human affairs, we have to rest content. In certain districts, moreover, the inhabitants are beginning to take what appears to be the only possible precaution. No erection above the ground seems to be able to resist the force of a first class tornado; but there is no evidence that any subterranean structure, such as a tunnel, can be in any way affected. (In saying this, I am perhaps a little hard on the Western editor who declared that *his well had been blown away*.) Anyhow, it is becoming fashionable in some parts to construct a vaulted cellar

or grotto near a house, so that the residents may have a safe retreat to which to resort during the short time (seldom more than a few minutes) that a tornado lasts. These refuges may be seldom used, but they cannot fail to be real comforts to timid people.

These descriptions of the doings of the American tornado may appear perfectly incredible to many of my readers, and some of them may possibly think I have been victimised by reckless or imaginative Yankee editors. Let me remind such sceptics that even in this country such phenomena occasionally occur on a rather alarming scale. In the year 1855 or 1856, a large orchard lying alongside the Old Wells Road, on the hill above Glastonbury, was struck by such a storm, and a narrow strip was completely cleared of trees. Those which refused to be torn up by the roots were simply snapped off close to the ground. All, of course, fell in one direction, and the branches were then violently crushed up together, just as an umbrella is closed. A man who witnessed the scene at close quarters was temporarily paralysed, and was unable for many hours to describe what he saw. The devastated orchard was inspected during the next few days by thousands of people, myself among the number. Four or five years ago, as near as I can remember, a similar hurricane visited the neighbourhood of Bournemouth and the Solent. In one place, a donkey cart was fairly lifted off the ground and dropped a few yards off. But it was off Cowes that the visitation assumed its most characteristic form. A large number of bricks were picked up from a barge which was lying there, and were presently rained down—most of them into the sea, but some of them upon the decks of certain yachts which were lying at anchor near. If a tornado is capable of playing such "incredible" pranks as these in a country where natural forces are seen in their mildest forms, it ought not to be altogether impossible to believe the accounts we hear only too often of the doings of similar phenomena in parts of the world where natural operations are on a far grander scale.

And now for Milwaukee.

The city, as I have said, is on the shore of Lake Michigan. The site was first settled in 1835, a year or two after the incorporation of Chicago, but it was not until 1846 that the place became a city. In 1840, it contained only 1,700 people, but by 1860 the population had reached 45,000, and it is now between 130,000 and 140,000. Nearly one-half of the inhabitants are Germans, or, as the Americans call them, Dutch, and one hears as much German as English spoken in the streets and tram-cars. The Germans constitute a very solid and valuable element in the strange *omnium gatherum* which constitutes the American people. Milwaukee is a place where their influence is of necessity overwhelming; and, if we may judge of them from the progress at present condition of the city, it is impossible to doubt that their influence is, on the whole, a wholesome and standing one. The prosperity of Milwaukee is everywhere spoken of with respect. It is admitted to be a solid thing, and not a mere flash in the pan. The citizens find a legitimate source of pride in the fact that, "unlike some cities we could mention," Milwaukee is not three inches deep in mortgages. In fact, it owns itself, and is not in pawn to Eastern capitalists. The remark about "other cities" is, of course, a sly poke at Milwaukee's mighty neighbour, Chicago; but it is only fair to remember that Milwaukee has grown at a rate which is moderate compared with that of Chicago.

and, further, that Milwaukee has never seen fifty millions' worth of its accumulated wealth destroyed in a few hours by a single calamity. If Milwaukee really owns itself, the fact is very creditable to it. On the other hand, it is no discredit to Chicago that it belongs largely to non-residents. A man who can do a safe and highly profitable business on borrowed capital is not thought unwise because he borrows.

The site of Milwaukee is more diversified and picturesque than that of Chicago. The ground rises gently from the lake shore, descends again to the river, and again ascends immediately beyond to a plateau which is more than 100 feet above the lake level. The north end of the city covers some rather high bluffs overhanging the lake, and it is here that the rank and fashion and wealth of Milwaukee have taken up their abode. And a very charming abode it is. The residences are of the usual costly and pleasant character. Standing high above the lake, they enjoy what is to all intents and purposes a fine sea view, for looking out upon such a sheet of water as Lake Michigan is precisely like looking out on the ocean.

Milwaukee is one of the most regularly-built even of American cities. The main thoroughfares are very wide, and many of them possess fine avenues of shade trees. The Milwaukee brick is of a pleasant cream colour, and to this circumstance is due the fact that the place is popularly known as the Cream City of the Lakes. The principal transear line, of which there are several, is known as the Cream City Railroad. Unlike most American cities, Milwaukee is, so far, without any large public park. It is also destitute of public buildings of the first-class, though it possesses many structures of moderate pretensions, which are no doubt well adapted to the purposes for which they were designed. The churches are numerous, and considerably more than half of them belong to the Germans and Norwegians. The principal business erections are grain elevators, flour mills, iron-rolling mills, pork-packing houses, and lager-beer breweries, which last are on a gigantic scale. Agricultural implements, machinery, leather, tobacco, and cigars are among the principal manufactures.

The most sensational event in the recent history of Milwaukee was, like that of Chicago, a fire. But whereas the great fire of Chicago destroyed property to an almost incalculable amount, while it caused the deaths of comparatively few persons, the Milwaukee fire burnt only a single building, but proved fatal to nearly a hundred persons. The fire to which I refer was that which, two or three years ago, destroyed the largest of the Milwaukee hotels, the Newall House. This calamity created almost as great a sensation throughout the States as the incalculably greater fire at Chicago. This was due to the fact of its having been attended by exceptionally horrible and distressing scenes. So far as I could gather from an inspection of the still vacant site, the hotel occupied a whole block, presenting a separate face to each of the four streets. The building was a lofty one, after the manner of American hotels; and, as usual, the servants of the establishment occupied the upper floors. The fire broke out below at night, the staircases were quickly destroyed, and the wretched people near the roof had no way of escape left. Many threw themselves from the windows and were killed by the fall, but many more were burnt to cinders (or, as the Americans say, "to a crisp"). How many perished was never exactly known, so complete was the destruction of some of the bodies; but the most moderate estimate placed the number at over 70.

This dreadful calamity affected the imagination and upset the equanimity of Americans as few events ever have or could. Hotel life in the States is a thing in which everybody is directly or indirectly interested to a greater extent than in any other country in the world: for the Americans are, above all others, a travelling and hotel-frequenting people. The Milwaukee fire caused a real scare throughout the country; and the newspapers, striking while the iron was hot, unanimously demanded that hotel-keepers should devote more study to the security of their guests. The alarm was not without its good results. The proprietors of hotels really do appear to have taken the terrible lesson seriously to heart. I do not remember entering a single hotel which did not possess fire-escapes of some sort. Whether they were always effective is more than I am prepared to say. At the Kirby House, the Milwaukee hotel at which I and my friend slept, there were outside iron ladders, rising from balcony to balcony. Inside I noticed a very simple and inexpensive contrivance which, in case of a fire, could not fail to be of service to all persons capable of keeping cool. This was simply a coil of strong rope, attached to a ring in the floor immediately below every passage window. In case of fire, a person had only to open the window, throw out one end of the rope, and slide down it. This probably is what no nervous person would succeed in doing. In many other hotels we were in, there were inside iron staircases provided exclusively as fire-escapes, and notices posted in the corridors familiarised the guests with the proper direction to take in case sudden escape became necessary. At a Baltimore hotel I saw another ingenious arrangement. A round hole, about a yard in diameter, had been cut in every floor, and through the centre of this hole passed a smooth pole, somewhat similar to that by which (as recently described) the firemen avoid coming downstairs. A sort of circular mattress, with a hole in the middle for the pole, exactly fills the opening in the floor, and upon this lie two semi-circular iron flaps, which safely cover up the mattress and the hole on all ordinary occasions. Supposing a guest on the top floor to be aroused by an alarm of fire, he rushes to the pole, throws back the hinged iron flaps, one to the left and one to the right, grasps the pole, and jumps upon the mattress. He thus slides smoothly down to the next floor, where the mattress stops and breaks his fall. Within a yard or two of the spot where he alights, he finds a similar pole arrangement leading down to the next floor—and so on, floor by floor, until he reaches the ground. It is obvious that scores of people might follow each other down these poles at intervals of only a second or two. The apparatus, moreover, is so simple that it cannot well get out of working order.

I cannot recommend travellers to put up at the Kirby House. It is a third-rate hotel, and not to be mentioned in the same day with most of the houses at which we were entertained. It happened, moreover, that when we were at Milwaukee the photographers of the United States were holding a great trade (perhaps I ought to say professional) conference or congress in the city. Apparently every American trade and profession holds its periodical conference. Even the barbers and the waiters have theirs, at which they concert common action for the benefit of their respective "professions." The Milwaukee hotels were crowded with men wearing ribbons, badges, and other marks which distinguished them from non-photographing humanity, and the presence of a great swarm of them at the Kirby House did not add to the

comfort and attractions of that hostelry. So full was the place that the corridors and every other available nook and corner were temporarily filled with beds, in which photographers sought repose, and (as a stranger might think) sought it in vain. For though my companion and I crept stealthily to our room on tip-toe, so as not to disturb the poor fellows whose beds filled the passages till they looked like wards in a workhouse or a hospital, nobody else appeared to make the slightest attempt to be quiet. During the greater part of the night, the photographers were stumping heavily backwards and forwards through the corridors, as if bent on making as much noise as possible. For those of their brethren who were sleeping, or attempting to sleep, "out in the cold," not the smallest consideration appeared to be shown. It was the incessant noise of the railroad car over again, and I can only hope that the men in the passages had become so far "acclimatized" to everlasting clatter as to be able to sleep in spite of it. I fancy this must have been the case, for I heard no word of complaint or expostulation. I confess that my own patience was entirely exhausted before daylight. The incessant tramping of men in heavy boots close to our chamber door was bad enough; but to make matters worse, a number of the photographers got together about midnight in the room immediately over ours, and began an animated discussion, apparently on the results of that day's trade "session," which lasted well into the small hours. Occasionally, and at no distant intervals, one or more of the party beat a sort of tattoo on the bare floor with their heavy boots, apparently for the exclusive benefit of the Britishers below. It was not until day began to dawn that there was any chance of sound sleep; and as some of the photographers were early risers, the interval of comparative quiet was very short. The late birds had not retired to their nests more than an hour or two before the early birds began to move, and the heavy march along the passages was resumed.

The Americans have many virtues—thousands of them, I dare say—and nobody pays a more ungrudging tribute to them than I do. But there is at least one speck on the sun, and I trust I shall not be crucified for pointing it out. The majority of the Americans do not realise the beauty and advantage of rest and quiet. Whatever they may be in their own homes, they are nervously restless and inconsiderately noisy when abroad; and these photographers at Milwaukee were fairly typical of the great mass of their countrymen.

The city newspapers were an amusing study during the sitting of this trade conference. Its daily debates were, of course, fully reported, under half-a-dozen of the usual "horse headings," the reports being interspersed at intervals of an inch or two by some striking statement or sentiment set out in a line in small capitals. Great ingenuity was displayed in the attempts to vary the chief heading day by day. An English editor would have had some such matter-of-fact heading as "Photographers' Conference" standing all the time. But the American editor scorns the commonplace. He looks for a new, striking, and comical heading every day. One day, the leading Milwaukee paper headed its report of the conference with the words "Face Flatterers" in type an inch high. Next day, the heading, in equally large letters, was "Photo Phellows." And so the variation was kept up day by day.

This reference to the press of Milwaukee reminds me that one of the city newspapers is *Peck's Sun*, and that

from the office of that journal was issued a book which has been sold by hundreds of thousands on both sides of the ocean—I mean "*Peck's Bad Boy*." I do not think this work ought to be accepted as a fair specimen of American humour. It has proved, it is true, an enormous success, as well in England as in America, but its success is not entirely creditable to the people of either country. There is much in the book which is irresistably laughable, and it must be admitted that the writer has a keen eye for comic and grotesque situations; but the fun is a little too broad, coarse, and rollicking, and the humour sometimes sadly needs refinement and finish. The whole thing is, no doubt, a faithful expression of the rough humour which passes current in the West, but it would hardly be accepted as true coin by the more refined society of the older States.

ON TO LAKE SUPERIOR.

For the second time, my travelling friend and I parted company at Milwaukee for two or three days. He made straight for St. Paul, Minnesota, by way of Madison; while I started on a long journey northward to Lake Superior, promising to join him at St. Paul later on.

On leaving Milwaukee, the northern arm of the North Western Railway, by which I travelled, diverges from the shore of Lake Michigan, and passes through a beautifully undulating and well-cultivated part of Wisconsin, in which clumps of the original forest, judiciously preserved, give a very sylvan and English-like appearance to the landscape. Passing to the west of the pretty Lake Winnebago, which would be thought quite a fine sheet of water if the mighty Michigan were not so near, the train stops at Fond du Lac, Oshkosh, and some other considerable places, and then strikes the shore of Lake Michigan again, at the head of an immense inlet called Green Bay, which must be nearly 100 miles in length. My train stopped for the night at a place called Menominee, a port on Green Bay largely engaged in lumbering operations. The place is very new, but I found there one of the most comfortable little hotels I have ever seen. Happily, no boot-blacks' or chimney-sweeps' "conference" was going on, and the house was only moderately full. I was awake a little too early in the morning by the buzz and whirr of many saw-mills; but as my rest had not been disturbed half the night by a noisy discussion of "photo phellows'" processes and profits, varied occasionally by the devil's tattoo on the floor above me, I was ready to get up; and, as an American would say, I got. Having disposed of an early breakfast, I at once made for the railway station along the wide sandy track called a road, and in a few minutes I was on my way still further into the wilds, in search of the southern shore of the greatest of all fresh-water lakes. Early in the afternoon, I reached a junction in the woods called Negaunee, and here I changed into a branch train which carried me down a steep decline to the city and port of Marquette.

The neighbourhood of Marquette is very rich in iron ore, and mining operations are carried on on a very large scale. The ore is carried down to Marquette in vast quantities, and is there shipped by means of a long pier specially adapted to the speedy tipping of heavy minerals into the holds of vessels. The business is so large, and the arrival of trains of ore so frequent, that I was reminded of the work of some of our own great coal ports. Marquette lives, apparently, on the smelt-

ing and shipping of ore. It is a pleasant little town, pleasantly situated on an irregular site backed by dense forests, and it looks straight out across Superior at the point where the lake is widest. Its healthy, invigorating atmosphere, beautiful walks and drives, fine scenery, boating, and fishing render it a very attractive resort for invalids and tourists.

I was beguiled by a whitey-brown gentleman of the genus tout, and apparently of very mixed parentage, who was awaiting my train with a hand-truck, to go to the Tremont House. The choice was not altogether a happy one. I had had nothing to eat since leaving Menominee, and as it was 4 p.m., I was naturally ready to face a "square meal." But nothing eatable was to be had at the Tremont before the six o'clock dinner. The place was comfortable and convenient otherwise. The landlady was civil and good-looking, and I was at liberty to talk with all the city through her telephone. But even a woman's good looks are thrown away on a hungry man, and I had nothing particular to telephone to the citizens except the fact that I was starving. I asked the whitey-brown man if there was no restaurant near, where I might get a mouthfull on which to tide over the next hour or two. He "guessed" there was a place of that sort round the corner, but he was evidently much less solicitous about my welfare than he was before he had hooked me and my baggage at the railroad depot. I went round the corner; I went, indeed, all over the town; but I discovered no single place where I could do anything less in the eating way than order a regular meal. Although the town is one of 7,000 inhabitants, and of some importance, it contained, so far as I could discover, nothing corresponding to our confectioners' shops, where light refreshments could be obtained. It was a case of a regular square meal or nothing. As I knew I should have to pay for my dinner at the hotel whether I ate it or not,—the charge there being, as usual, so much per day for entire board and lodging—I resolved to starve on till six o'clock; and this I did.

I met for the second time at the dinner table with a junior partner in a great fur establishment at Chicago. He was French by extraction, and the one desire of his life was, he told me, to see Paris, his father's native city. I was much interested in the information this young man gave me as to the American fur trade. He was himself always on the look-out for skins. He travelled to Marquette by the same train as that by which I went. During the stoppage at one of the stations in the woods some distance back, he saw a fine black bear tied up close to the line, and at once jumped out, discovered the owner, and inquired the price of the animal. Before the train started, he had agreed to buy the beast, on the understanding that the vendor would deliver it, alive and uninjured, at his Chicago address. As I supposed it was merely the skin of the bear that he wanted, I asked him why he had arranged for the delivery of the live animal. He replied that it had struck him that this large bear would make a very good trade sign; and his intention was to have a handsome cage made for it, and to keep it constantly displayed above the front of his store.

The growth of the firm to which this young man belonged had apparently been as rapid and wonderful as that of the city in which their operations were carried on. They had, my informant told me, succeeded in placing themselves in the very front rank; indeed, they no longer regarded themselves as second to any firm of furriers in the country. Their fame had gone out even to the old and distant cities of the East, and the

wives of Boston and New York millionaires were now among their many patrons. Only a few days previously, a grand Boston lady—the wife of a railway king—had telegraphed to the firm to know if they could send their "chief artist" to take instructions for a complete suit of the most costly furs. The reply of the firm was that he could not be spared to take so long a journey, and the lady at once wired to say that she was coming to Chicago to be measured and to give the necessary instructions. The cost of her outfit would, my informant said, amount to thousands of dollars, and there was, therefore, nothing so outrageous in her undertaking a double journey of more than a thousand miles each way to give the order. Naturally enough, this young gentleman expressed a liking for doing business with Eastern millionaires. There was, he said, nothing they would not pay for luxuries to a firm which, like his, had obtained a first-class national reputation. Some of his stories were, it must be admitted, rather "tall"; but there is nothing entirely improbable in them if one remembers how much furs are worn by Americans in the winter, and how profusely they are accustomed to spend money on the fashionable luxuries of themselves and their woman-kind.

I learnt a good deal from this Chicago furrier about that interesting but disgusting little beast, the skunk. The furrier was, of course, pecuniarily interested in the animal's skin, its fur being very fine and highly prized; but in his earlier years he had once come in contact with the creature itself, and that one occasion was likely to satisfy him for a lifetime. A recent writer has put a description of the skunk into a nut-shell. It is somewhat as follows:—

"The skunk is an animal of the polecat tribe. The skunk stinks. He does nothing else. It is enough."

That brief description speaks volumes, for in presence of the horrible, all-pervading, inextinguishable stink of the creature, all his other qualities, whether virtues or vices, are lost sight of. The truth is, the skunk has been armed by Nature with a perfectly unique mode of self-defence. That mode is not a pretty one, regarded from the point of view of the larger animal which wants the skunk for breakfast, or of the hunter who hankers after his skin; but it is very effective, and in this case Nature has evidently studied effectiveness without much regard to the likes and dislikes of the skunk's enemies. If they don't like his system of self-defence, they have only to keep at a respectful distance. The fact is, the skunk, when pursued, projects a filthy discharge at his pursuer, with an accuracy of aim which is described as marvellous. This remarkable missile effectually stops every living creature it hits, for its odour is intolerable, and all the water in Lake Superior will not wash it out. A garment which has been "struck" is usually burnt, although it is said it may be disinfected and deodorized by being buried in the ground for a certain number of weeks. The Chicago furrier to whom I have referred told me that once, when he was young and green, he pursued a skunk with a favourite dog. Both lad and dog were badly hit. The former burnt his clothes, but the poor dog sickened and died. On two separate occasions, I was in a train which ran over and killed a skunk. The odour which immediately filled the cars was a thing beside which the scent of a fox, even when lying "breat high," is as a whiff from the shores of "Araby the Blest."

It was Saturday afternoon when I arrived at Marquette, and the boat by which I had arranged to go on to Duluth, at the head of the lake, was due

early on Sunday morning. The whitey-brown porter called me before it was light, and carried my baggage down to the pier. The weather was wretched. The rain was heavy and incessant, and the wind moaned as dismally as I ever heard it in England. The prospect of going "to sea" on the largest lake in the world on such a day was not an exhilarating one, and my spirits were as damp as my clothes by the time I got aboard the boat. But I was fairly committed to the voyage, and there was nothing to be done but to go on.

LAKE SUPERIOR.

No sooner was the boat fairly outside the harbour of Marquette than she began to stagger and plunge in a fashion for which my Atlantic experiences had by no means prepared me. Lake Superior was, in fact, in that "nasty" state of commotion which those who have been accustomed to the English Channel would have fully appreciated. The amount of "sea on" would have astounded those who are accustomed to regard all lakes as comparatively smooth. To the west of Marquette, the waves were dashing heavily against the cliffs which there skirt the coast, and sending clouds of spray high in the air in the most approved Atlantic style. The lake boats are not built to contend with very heavy weather, and this particular vessel laboured a good deal, pitching about in a lively but disagreeable fashion. Within an hour, nearly all the passengers were sick. A mere handful, myself among the happy number, contrived to hold out to the end. The weather was clearly exceptional for the lakes, for even the numerous coloured stewards went down one by one. One of them, a merry fellow with a wicked twinkle in his eye, came every few minutes round to the stern of the vessel, where I and about half-a-dozen other passengers were holding out, and holding on to our seats, and informed us with a chuckle that another of his mates was "down." It was the story of the ten little niggers over again, only in this case the niggers were big. One by one, the number fit for service went down—from ten to nine, from nine to eight, from eight to seven, and so on, until at last the merry messenger of ill, slightly paraphrasing the words of Job's messengers, assured us that he only was left alone to wait upon us. We laughed at him, and told him that his turn had evidently come at last; but our prediction proved to be wrong, for he continued to keep on his legs to the last.

If my readers will look at a map of Lake Superior, they will see that a long, curved, horn-shaped peninsula runs out from the southern shore into the very centre of the lake, terminating in a sharp cape called Keweenaw Point. Apparently, a vessel bound from Marquette to Duluth is bound to double this cape, and make a very circuitous voyage. But it happens that there is a small sheet of water, called Portage Lake, in the middle of the peninsula, and this little lake discharges its waters into the great lake by means of a short river. A short canal has been cut from the lake to the coast on the opposite side, and a channel navigable for small vessels has thus been completed right across the peninsula. Our boat, therefore, instead of making for Keweenaw Point, steered straight for this channel, and in a few hours we began to get under the lee of the long peninsula. The "sea" then gradually went down, and by the time we reached the mouth of the little river leading up to Portage Lake, the water was smooth, the sun shining, the stewards had returned to their duties, business was at a discount, and victuals and drink at a premium. By three or four o'clock, the boat was lying at a

wharf at the end of the little lake, between the two prosperous towns of Hancock and Houghton. These towns are in the centre of a district which is enormously rich in copper. Some of the ore consists almost entirely of the pure metal, and mining operations are carried on on a large scale and at a handsome profit. We lay at the wharf two or three hours, and, by the time our boat had steamed slowly along the straight artificial canal which connects Portage Lake with the western part of Lake Superior, the sun was setting in the mighty waste of waters which we had yet to traverse.

This vast lake is 360 miles long, and at one point 140 miles in width. Its area is 32,000 miles, and it is, therefore, larger than Ireland. It is the largest body of fresh water in the world. It is exceeded in size by at least one other lake, viz., the Caspian Sea; but the Caspian, like some other Asiatic lakes, consists of salt water.

Lake Superior partakes somewhat of the crescent shape of the Lake of Geneva. Its outlet is at its eastern end, where, by means of the short St. Mary River, its waters flow into Lake Huron. The river is obstructed by the rapids known as the Sault St. Marie, and a short canal has been constructed to enable vessels to circumvent this rather serious obstacle. A large number of small streams run into Lake Superior, but it receives no considerable river. It is, indeed, itself almost on the watershed which separates the basin of the St. Lawrence from that of the Mississippi on the west, and from the basins of the rivers which flow northwards into Hudson's Bay. At one point, a stream which ultimately flows into Hudson's Bay rises almost within sight of the shore of the lake.

At its extreme western end, Lake Superior gradually narrows down to the width of a river. The mouth of the River St. Louis may, indeed, be said to form its upper end, though the St. Louis itself is an inconsiderable stream. Just at the point where the river merges into the lake, two rival towns have recently sprung into existence—one on the north shore, called Duluth, and one on the opposite side bearing the name of Superior City. These towns are, in this direction, at the extreme limit of inland fresh-water navigation, just as Chicago is at its head on Lake Michigan. Duluth and Chicago are about equi-distant from the sea. If a steamer left each port for the ocean at about the same time, the two vessels, after traversing about 400 miles—one of Lake Superior and the other of Lake Michigan—would come together on entering Lake Huron, and from that point to the ocean their road would be the same—viz., down Lake Huron, through the River and Lake St. Clair, the Detroit River, Lake Erie, the Welland Canal (thus giving the go-by to Niagara), down Lake Ontario, the Lake of the Thousand Islands, and the River St. Lawrence. The total distance from Duluth or Chicago to Quebec by this route cannot be less than 1,800 miles.

It was to Duluth that the steamer I boarded at Marquette was bound. Soon after we emerged from the canal (described in a previous chapter), I retired to one of the cupboards known in the elegant language of the steamboat advertisements as "state rooms;" and as I had no companion to share that spacious and sumptuous apartment with me (6ft. 6in. by 4ft. 6in.), I got on with the sleeping business tolerably well. When I looked out of my hutch window in the early morning, I found that we were steaming out of a deep bay in the south shore of the lake, where we had been in call at two favourite little watering-places, called Ashland and

Bayfield. At the entrance to this bay lies a remarkable and beautiful group of islands called the Twelve Apostles, at whose christening, by the way, an Irishman surely presided, for there are 27 of them. Their name is even a greater misnomer than the Lake of the Thousand Islands. The run through the twenty-seven Twelve Apostles (that sounds odd, but I can't help it), and on up the western end of the lake, was an exceedingly pleasant and interesting one. The weather was fine and the water smooth, and there were a good many pleasant and amusing people on board—mainly tourists from the great cities, taking a pleasant holiday in the bracing air of the lakes during the hottest part of the summer. I made some acquaintances among these people whom I shall not readily forget. Two of these—a gentleman and his wife from Philadelphia—I afterwards visited at their home, and I have been in correspondence with them ever since. I am greatly indebted to them for their kindness and courtesy.

I AM AGAIN CROSS-EXAMINED.

But one of the most amusing of my American experiences happened on board this boat. I had been duly cautioned in advance by Mr. W. D. Howells, with whom I crossed from England in the *Parisian*, that I should be pretty sure some day to be put through my facings by a Boston bluestocking, and that I had better stand prepared to be examined off-hand on the differential calculus, the binomial theorem, the origin of life, the squaring of the circle, the sacred books of India, and a few other similar questions. I met the predicted lady inquisitor on board the Duluth boat; but she did not hail from Boston, and her acquirements and curiosity were almost entirely literary in their character. She was, when I first saw her, sitting in the bow of the boat, with a blue veil drawn over the upper part of her face, listening to a conversation I was holding with some of the other passengers. Presently, she came forward and took me in hand on her own account. Without moving a muscle of her face, or in any other way expressing either amusement, surprise, pleasure, or dissatisfaction, she cross-examined me straight ahead for about an hour. Her questions were put in a tone as monotonous as that of a High Church curate, which never varied from first to last. She might have been a patent cast-iron questioning machine, so utterly impassive was she, so formal and monotonous were her accents, and so prompt, precise, and regular were her many inquiries. I felt as if I was once more a little boy at school, undergoing examination at the hands of a strong-minded lady visitor. It was difficult to resist the impulse to stand up and put my hands behind me, and I should hardly have been surprised if she had put me "in the corner" or called a coloured steward to birch me. But the business was, on the whole, so amusing that I felt no desire to escape from her strong grasp, and I held on, answering her questions as best I could, until she was tired. She was not an old lady, nor yet a very young one. She was not particularly attractive, and her soul was clearly above the follies and foibles of her sex. She was, in short, a literary woman.

She opened the ball by first catechising me about my journey. "What vessel did you come over in?" "And what one do you return in?" "And how far West are you going?" "And are you travelling alone?" "And what do you think of this country?" These and scores of similar queries succeeded each other in just such a

mechanical, impassive tone as a teacher might adopt in asking the printed questions of an arithmetical treatise for the ten-thousandth time. My inquisitor heard my replies in silence, unmoved, and, so far as one could gather from any outward sign, uninterested. She made few, if any, remarks in reply; but the moment I had finished one answer, the next question wailed off at me as if by some automatic clockwork arrangement.

I wish I had a shorthand note of this conversation; but, unfortunately, I have no note at all, and it is now too late to attempt to reproduce many of the details. What I do remember is that many of the questions on literary topics referred to our oldest poets. Having exhausted her inquiries about my journey, the lady in the blue veil suddenly sprung upon me the question, "Is Chaucer much read in England?" When I had recovered my breath after this sudden and unexpected transfer to a new field of inquiry, I said I did not think he was. I was, indeed, bound to admit that, owing to the necessity of referring to a glossary to learn the meaning of about every second word, I had never been able to read much of him myself. I knew, of course, that Chaucer was the Father of English Poetry, and that it was our bounden duty to admire him; but I feared that most Englishmen did as I did—took Chaucer pretty much on trust, and worshipped at his shrine because it was the orthodox literary thing to do. In all this, I trust I did not seriously libel my countrymen.

The last syllable of my remark about Chaucer was hardly out of my mouth when from behind the veil I heard the further question: "And do your people read Spenser much?" I now began to see I was in for it. I felt sure that Piers the Ploughman, and all the queer old writers of quaint English verse immortalised in "*Percy's Reliques*," were behind that blue veil, ready to leap forth and put to shame my ignorance of the beginnings of English poetry. But, recovering from my embarrassment, I made bold to say that the case of Spenser was like that of Chaucer, only, perhaps, less so. So many of his words were obsolete that reading him was really very tedious work. "Then, think," I said, "of the awful length of his immortal poem. Why, the *Faerie Queene* makes five volumes in my library edition, and I confess I have never done more than dip slightly into each." As I found I was not to be whipped or sent into the corner for this confession, I grew bolder and added: "The fact is, I never yet met the man or woman who claimed to have conscientiously read the *Faerie Queene* through from end to end." Without departing one hair's breadth from her usual manner, my inquisitor demolished me with this cold, quiet, impassive remark: "I HAVE."

"Crushed again!" I thought and felt, as Lady Jane says in *Patience*. Here was a prodigy of a woman! She had read Spenser's great work from end to end! Prodigious! I began to feel that I was in the presence of a being of a superior order, and some time elapsed before I could sufficiently collect my thoughts to assure the owner of the blue veil that she occupied the proud pre-eminence of being the only mortal I ever met who had accomplished the Herculean task in question. But nothing moved that woman. She received my compliments as impassively as if she had been a statue.

From Chaucer and Spenser, my inquisitor presently got on to some of the later poets. About some of these I could speak with a little confidence; but I was henceforth oppressed and overwhelmed by the one thought: "This woman has read the *Faerie Queene* through—ALL

THROUGH!" And the thought awed me and made me afraid.

"A woman of stone!" says somebody; "an embodied literary fad in petticoats, utterly heartless!" I was sorely tempted to think the same for six weeks. But pray suspend judgment a moment, and hear the sequel of my story; and let us all learn from that sequel the lesson which has, perhaps, been taught us ineffectually a thousand times before—that appearances too often lead us to form a very unjust estimate of the characters of others.

When I was in Philadelphia in the following month, I learnt accidentally that my questioner was a lady from Cleveland, and that she was widely known and esteemed, both as a literary celebrity and as a self-sacrificing philanthropist. She was in the habit of publishing her writings (mainly poetry), and of devoting the whole of the proceeds to benevolent purposes. Further, she was irrevocably doomed to blindness. Her sight was already seriously impaired, and the doctors declared that nothing could save it. The stony gaze, the blue veil, the impassive manner were all explained, and the revelation saddened me not a little. It was, indeed, inexpressibly painful to think that this cultured and estimable lady was, when she catechized me, taking a last, imperfect look at her country's natural beauties, conscious that her eyes were gradually but surely closing upon them and all the world for ever.

A CITY WHICH HAS TO "GIT UP AND GIT."

As our steamer approached the western end of the lake, the northern shore came gradually into view, and the expanse of water began to narrow by imperceptible degrees. We now began to look out for Duluth. A group of passengers (including myself) gathered in the bows of the boat, and discussed the probable effect of the impending completion of the Northern Pacific Railroad, which, for the time, has its eastern terminus at the head of the lake. I ventured to suggest that the future of Duluth was assured by the construction of this line, seeing that that place was virtually its Atlantic terminus and port. A tall American who was standing beside me briefly endorsed my view of the case in these choice and expressive words:—

"Yaas, I guess that city's got to git up and git."

Presently, both Duluth and Superior City came into view, and on comparing the two as they appeared from the lake, some of us could not resist the temptation to remark that Superior City was a very inferior-looking place. The joke was no doubt a very obvious and common-place one; but then what else can be reasonably expected of persons who have been demoralized by such "puns" as respectable comic papers and eminent writers of burlesque are now-a-days accustomed to perpetrate?

While talking about the city which has "got to git up and git," I must on no account forget the highly poetical language which a member of Congress had recently applied to Duluth, during a debate on a proposed vote of money for the construction of a harbour at the upper end of the lake. This orator, rising to the full height of his mighty theme, spoke of Duluth as "the zenith city of the unsalted seas;" and the speech containing this beautiful passage was on sale at the city hotels and book stores. There is to me something inexpressibly comic about this poetical fight. "The unsalted seas!" Only think of that! Does it not appear to suggest that all the other oceans and seas were subjected to some sort of pickling process, from which the great

American lakes were, for some reason, exempted? Done into plain English prose, the whole passage, of course, simply means—"The city at the head of the fresh-water navigation." But such language would have been too common-place for an American orator pleading for liberty to put a hand into Uncle Sam's pocket; and the ears of Congress were accordingly tickled and its enthusiasm appealed to by the comical poetical paraphrase I have quoted. Whether the orator secured the grant I cannot say. No doubt he did; for Uncle Sam is a very good-natured relative. Besides, owing to the necessity (from his point of view) of levying heavy import duties, for the purpose of protecting his manufacturing industries against the determined and discreditable attacks of British Free-traders, the old boy is so flush of money that he takes it as a positive kindness on the part of anyone to suggest a decent excuse for spending it.

DULUTH.

I am bound to say there is nothing very poetical about Duluth. It is at present a city "in the rough." The opening of the Northern Pacific Railroad has naturally woke the place up. This expression, perhaps, implies that it was once asleep, and such an implication would probably be a libel on any Western city. Duluth is, at any rate, wide enough awake now. And this attitude of sleepless vigilance is not confined to its inhabitants proper. Capitalists and speculators in all parts of the country have long been discounting the capabilities and probable future of the place, and when I was there, it was enjoying a "big boom." Speculation in real estate was raging; new buildings were rising on every hand as if by magic; and three daily newspapers (three for a population of 15,000!), mad or drunk with the excitement by which they were surrounded, were shaking their fists at St. Paul (the city, I mean, not the Apostle of the Gentiles), at Minneapolis, and especially at that mean, dirty little "cuss" over the way (Superior City), all of which Duluth is pleased to regard as commercial rivals, defying them to "come on" and do their worst. The rivalry between Duluth and Minneapolis is specially amusing. Minneapolis is, speaking comparatively, an old-established city, and its vast flour-mills, driven by a fall on the Mississippi, have long rendered it a convenient and attractive market for the cereal produce of the whole of the district which the Northern Pacific Railroad has for many years been opening up bit by bit. The object of Duluth is to convince the farmers of Minnesota and Dakota that it is to their advantage to send their grain on to the head of Lake Superior and there ship it to Europe, instead of taking just such prices as the wealthy ring of Minneapolis millers choose to give them. The contest is at present rather one-sided, like a quarrel between a noisy, snapping terrier and a great mastiff or St. Bernard, conscious of his strength. Duluth is noisy, defiant, self-assertive, cheeky; Minneapolis is half-amused, slightly satirical, but on the whole disposed, in the consciousness of its strong, established position, to ignore its upstart rival. The rapid development of the country westward will probably provide full employment for both cities. Minneapolis and St. Paul certainly have nothing to fear; but, on the other hand, I sincerely regret that I do not happen to possess a few eligible "corner lots" at Duluth, to "hold on to" till the right moment; for I hold it as an undoubted and indisputable fact that Duluth is going to "git up and git."

There is not much to be said about Duluth as a town. It has a great future before it, beyond a doubt; but it has had no past, and its present is a mere laying of foundations for the greatness which has yet to come. Its public buildings are, as yet, neither important nor imposing. The finest I saw was a new Opera House, on a rather large scale, which was rising immediately in front of my hotel on Superior Street. This street, by the way, is the leading thoroughfare. It runs parallel to the lake shore, and possesses the inevitable line of tram-cars without which no American town would be complete. When I was there, the street was "up" for the laying of water pipes, and the traffic was carried on under serious difficulties. The civilization of Duluth had, at any rate, got as far as waterworks.

The surroundings of Duluth on the land side are stern and somewhat forbidding. The land rises rapidly from the shore of the lake and forms a rugged background to the town. The heights are thinly covered with hardy pines, but the naked rock is almost everywhere conspicuous. I saw little trace of soil such as an agriculturist could turn to account. Duluth may export wheat, but I imagine it will never grow any. The climate is apparently bleak and chilly, even in summer. I was there on the 13th August, and even then the wind was so strong and cold that, in spite of the brilliant sunshine, I had to put on my overcoat and button it up to the chin whenever I went out of doors. The change from the intense heat I had experienced a few days previously in some of the great cities was, on the whole, a very grateful one; but it was a case of having "a little too much of a good thing." Those who remember that Duluth is further south than any part of England may, perhaps, be surprised to hear of this low summer temperature, which may possibly have been exceptional; but it must not be forgotten that temperature is not simply a matter of latitude. This is particularly true of North America, where the same places (Montreal, for instance) often experience the greatest extremes of heat and cold, the thermometer ranging from over 100 degrees in the shade in summer down to 40, 50, or even 60 degrees below zero in the winter.

THE NORTHERN PACIFIC RAILROAD.

I have made several references to the Northern Pacific Railroad, of which Duluth is at present the eastern terminus and port. This line must not be confounded with the Union Pacific and the Central Pacific, which together form a continuous route from the Missouri to the Pacific coast further south, and by which (as I shall in due time explain) I travelled to California. The Union and Central Pacific route has been open ever since 1869. The Northern Pacific, which has been many years in course of construction, and had been opened piecemeal, was finished only about the time when I was on its eastern end. Starting from Duluth, and by a branch line from St. Paul and Minneapolis, the Northern Pacific runs nearly due west across Minnesota, Dakota, and the greater part of Montana. Passing within 50 miles of the famous Yellowstone National Park, to which it sends out a branch, the main line then makes an enormous detour towards the north in order to cross the Rocky Mountains, and ultimately finds its western terminus at Portland, Oregon, on the Columbia River, nearly 800 miles north of San Francisco. Except near its eastern and western extremities, the district through which the Northern Pacific runs is very sparsely

settled as yet; but, as usual, population is following the locomotive, and there can be little doubt that some day the whole belt of country served by the line will be thickly peopled.

The Northern Pacific Railroad hopes, it is said, to approach nearer the Atlantic seaboard at no distant date. The scheme is to continue the road along the southern shore of Lake Superior (which is already traversed by two or three isolated lines that might easily be joined up into one great system), to bridge the Sault St. Marie—a work which will tax the resources of engineers and financiers alike, and thus to unite with the Canadian Pacific Railway which passes within 70 miles of the proposed bridge. Thus direct access will be obtained to Montreal, Quebec, and, of course, the lower St. Lawrence. This extension is certainly not proposed in the interests of Duluth; but when the enlargement of the Canadian canals is complete, there can be no doubt that shippers will send much grain from Duluth to Europe direct in order to avoid the railway charge to Montreal.

It was to the opening of the Northern Pacific last August that representatives of all the countries of Europe were invited by Mr. Villard, the president of the line, and Mr. Rufus Hatch, a New York banker who had obtained a concession for the erection of hotels in the Yellowstone Park. These visitors were carried across the continent and back in stately style. They ate, drank, slept, and enjoyed themselves generally, on the trains, at the sole expense of their hosts. In short, they had what the Americans call a "high old time." But some of the English guests got into sad disgrace. They looked their gift horses in the mouth. That is to say, they criticised the accommodation provided for them, and generally made nuisances of themselves. So, at least, the American papers bluntly declared, with that anti-beating-about-the-bush spirit which is so characteristic of them. An English peer and peeress, who crossed with me in the *Parisian*, were declared to be among the chief offenders. They, it was said, wanted a Pullman "sleeper," with its 24 berths, all to themselves, and, in asserting their claim, out the train in two by locking both the end doors of the car. Other signs of the British nobility (so it was said) quartered themselves at the New York hotels pending their departure west, and had the hotel bills, and even their tailors' bills, sent to Messrs. Villard & Hatch. How much of these stories, as told by the newspapers, was true, I cannot pretend to say; but that there was some sub-stratum of truth beneath them I have reason to believe. The American newspapers published the names of the offenders in full, and minutely described their connection with the British aristocracy. If one quarter of what was printed was true, the British deputation must have contained some of the meanest and most exacting of mortals.

The rejoicings over the opening of the Northern Pacific were thus disagreeably marred, but something worse soon after followed. Mr. Villard, having just contrived to carry his great work through to completion, "bust up," as the Americans say. The stock he held in the line dropped in value until the millions he supposed himself to possess disappeared utterly. Mr. Hatch went down with him, and thus disappeared the two men whose names had so long been associated with one of the most gigantic of modern enterprises. But the Northern Pacific Railroad remains, to become one of the most powerful agencies in the peopling and enriching of half-a-dozen great States.

NEW YEovil NOT TO BE FOUND.

Those of my readers who know the neighbourhood of Yeovil will remember that, some 12 or 14 years ago, a Dissenting minister named Rodgers, who had resided for some time at Stalbridge, induced two or three score of people to accompany him to Minnesota, for the purpose of establishing a colony, to be called Yeovil. Mr. Rodgers had been talked into the enterprise by a clever and astute agent of the Northern Pacific Railroad. Having a large family and a small income, he jumped at the opportunity which appeared to offer of transferring himself and children to a new Land of Goshen. That he was honest and in serious earnest I never had any doubt. Indeed, he did his best to persuade me to abandon this journal, in order to accompany him across, there to establish the *New Yeovil Gazette*, which, as a matter of course, the proposed colony was bound to have by the time its first house was roofed in. I said "No" firmly, but gently, so as not to hurt the rev. gentleman's feelings. Thoroughly convinced himself, Mr. Rodgers managed, however, to convince a number of others, and the party duly started. They also duly arrived and founded the new city of Yeovil. But, for some reasons which I have never fully understood, the colony proved to be a dead failure. Some of the colonists soon returned to England, and the rest were scattered. All trace of the founder of the colony was lost for years; but at last, some two or three years ago, I received a long letter from him. He was then in Virginia, where he had found another Goshen, and his object in writing was to induce me to allow him to puff that part of the States. He made not the smallest reference to the Minnesota colony, or to his reasons for leaving it. I, therefore, wrote and told him that his letter should have my consideration on his explaining to me why he had abandoned New Yeovil. He never troubled me further, and, I need hardly add, his puff of Virginia did not appear. The probability is, that he was being made use of by the persons chiefly interested in some new land or railway scheme. Anyhow, I felt under no obligation to assist him.

This settlement of New Yeovil was at a point on the Northern Pacific Railroad, somewhere between Duluth and Glyndon (now the junction of one of the Manitoba lines), and before leaving Duluth I made particular inquiries about it. The long and short of the matter is, there is now no such place. If the settlement survives at all, it passes under some other name. As Yeovil, it is absolutely unknown, and I believe a place which has since sprung up on or near its site is called Hawley. This I learnt from a Minneapolis map publisher's agent, who knew every settlement on the Northern Pacific line west to the Missouri. He showed me a perfectly new map of Minnesota on a large scale, and we searched for the name of Yeovil in vain. It is clear, therefore, that the place is dead. But suppose it died for lack of a newspaper! In that case, is the blood of the defunct settlement on my head? Agonizing thought!

DULUTH JOURNALS.

As I said, Duluth had three daily newspapers in August of last year. There are probably four or five by this time, all discounting the mighty future in store for the city, in which future those of them which can manage to pull through may possibly be lucrative concerns. At present, they have little to do but to chronicle the smallest of "small beer" in the largest of leader type. The movements of every citizen appear

to be duly noted. Here, for instance, are two "personal pars" from one of the papers:—

"Mrs. J. E. Woodbridge and Dwight E. Woodbridge leave this evening by the *Nyaack* for Detroit, Mich."

"Miss Ensign starts this evening by the *Nyaack* for the East, and will meet her sister in Ohio. After a short visit there, both will return to Duluth."

These Western papers are by no means mealy-mouthed or mock-modest. They call a spade a spade with a vengeance, and their candour would be charming if it were not quite so blunt. Here, for instance, is what one of the Duluth papers says about the claims of its own town to the rank of a city:—

"Duluth hopes to be a city shortly. She has now eighty saloons and about thirty prostitutes."

Saloons, of course, are drinking shops.

Here is what is intended for a humorous description of a sudden visit of an excise officer to those Superior City people who were cheating the revenue:—

"A big cyclone struck Superior one day last week, and created great commotion among not a few here. It came from the south-east in the shape of a deputy revenue collector, and he did a mighty lively collecting business too, among our numerous whisky and tobacco dealers. It don't pay to have a license in your son's name; it don't pay to wholesale liquor on a retail license; it don't pay to be even a beerman's agent without a license; it don't pay to buck the tiger (Uncle Sam) and sell without any license; and it don't pay to keep a lot of empty cigar boxes stuck away in the corner, with the stamps uncanceled, as a dozen or more of our dealers can readily subscribe to. It is said the collector took about \$600 out of town with him. Don't try to buck against Uncle Sam; he will get you where the hair is short, sooner or later."

ON TO ST. PAUL.

The railway journey from Duluth to St. Paul was, on the whole, the most tedious and dreary in the whole of my American experience. The distance is 150 miles. The time-tables allow 10 hours for the journey; but even this liberal allowance was insufficient for my train, for it was an hour or two late in reaching St. Paul. That is to say, I was between 11 and 12 hours in traversing the 156 miles, the average speed being therefore little above that of the best of our old stage coaches. But, in spite of the general dreariness and tediousness of the journey, it was one that I should have been sorry to miss.

From the level of Lake Superior, the line is carried up to the high ground which separates it from the valley of the Mississippi by way of the rugged and romantic gorge through which the St. Louis River flows into the lake. For wild grandeur on a moderately large scale this gorge is justly famous. The narrowest and steepest part of it are known as the Dalles of the St. Louis, and the scenery at these points is grand and rugged in the extreme. The river, which was much shrunken when I saw it, is in the wetter seasons of the year a raging and foaming torrent. Its rugged bed is interrupted by numerous cascades and rapids. The fall at one point is as much as 400 feet in four miles; and the torrent leaps from fall to fall and rushes from rapid to rapid in the form of an almost unbroken mass of foam. The steep sides of the gorge are clothed from top to bottom, where the rock is not perfectly naked or quite perpendicular, with sombre forests of pines, whose dark foliage contrasts strikingly with the snowy whiteness of the torrent as it boils and rages at the bottom of the chasm.

The railway threads the whole length of this gorge. Where the gorge winds (as it does very often), the line

winds too. The engineering is of a particularly bold character. The ascent from the lake is very steep, and in many places the line is laid on a mere artificial shelf of rock, at a giddy height above the torrent. Here and there, cross chasms, through which tributary torrents pour down into the St. Louis, are crossed at right angles on trestle bridges, whose apparent flimsiness is trying to weak nerves. As our train slowly worked its way up the gorge, crawling laboriously round the innumerable curves like a huge snake, the passengers crowded to the car platforms to secure a good view of the wonderful scenery. All admired; but some were alarmed, and visibly breathed more freely when we emerged from the gorge into the almost unbroken forests of the great watershed.

VIGOROUS TWIN CITIES.

St. Paul and Minneapolis, the only two large and important cities in Minnesota, are situated within ten miles of each other, and both are on the Mississippi River, at a distance of 2,200 miles from its mouth. The census of 1880 showed a population of about 50,000 in each city, or a total of 100,000, but it is growing so rapidly that the two cities are now declared to contain nearly 150,000 people. They are, moreover, fast approaching each other, as if with the object of indulging in a mutual embrace. The suburbs of St. Paul straggle far out on the road towards Minneapolis; and long before the traveller from the former to the latter reaches the Minneapolis station, he finds himself passing through a vast region thickly dotted over with perfectly new frame houses. Local enthusiasts declare that the two places will one day be absorbed in each other, and constitute a single vast city; and more unlikely things than that have certainly happened in America. The rapid settlement of Manitoba, which province is immediately north of Minnesota, and the opening up of the country westward to the Pacific by means of the Northern Pacific Railroad, have immensely stimulated the trade and growth of both cities, and it is impossible to set limits to the prosperity of either. They are supplied with splendid railway accommodation in all directions, and by means of the mighty river which they bespindle, St. Paul has access by water, not only straight south to the distant Gulf of Mexico, but also to all places situated on the many navigable branches of the Father of Waters.

I cannot say that a first sight of the Mississippi at St. Paul impressed me as the St. Lawrence did. The latter is clear, deep, rapid, with well-defined banks, and its level apparently varies but little. The Mississippi, on the other hand, is turbid—the colour of chicken broth, as somebody has remarked. The quantity of water, moreover, varies so much with the varying seasons that the stream might easily be mistaken for a tidal river. After a dry season, the shrunken stream is confined to a comparatively narrow space in the centre of its wide bed, and a vast acreage of more or less unpleasant-looking foreshore is exposed on either side. At such times, the Mississippi does not present an attractive spectacle. But presently the rains descend, or the snow melts, and the floods come, and then the river is brim-full from bank to bank. The banks, indeed, are not always capable of keeping the vast stream within bounds, and then, especially on the lower reaches, there are disastrous floods, resulting in a vast destruction of property, if not of life. Some of the tributaries of the great river are in this respect like the main stream. For two years in succession, the Ohio valley has been

devastated by floods on a gigantic scale, and the distress and loss resulting therefrom, especially in the neighbourhood of Cincinnati, have been almost beyond calculation.

The site of St. Paul is said to have been visited as long ago as in 1680 by a Jesuit missionary. Eighty-six years later one Jonathan Carver came there and made a treaty with the Dakota Indians in what is still known as Carver's Cave. The first treaty of the United States with the Indians, throwing their lands open to settlement, was concluded in 1837, and the first plot of land bought was secured by a Canadian named Parent, who sold it two years later for 30 dollars. That plot is now in the centre of the city, and has increased in value many thousand-fold. The first building was erected in 1838, and the streets were laid out in 1847. It was not till 1854 that the place became a city. It had then 3,000 inhabitants. The name was derived from a log chapel dedicated to St. Paul, which was built in 1841.

St. Paul stands mainly on the left or west bank of the river, which bank rises rather rapidly from the water in the form of four distinct terraces, one above another. The Americans call such moderate elevations "bluffs." The situation is a very picturesque one. The city stands at a considerable height above the river, which here makes a wide, semi-circular sweep, and the bluffs on the opposite bank are prettily wooded. The site must have been a very beautiful one when it was in a state of nature and the river was full. Indeed, at various points, both above and below St. Paul, the scenery of both banks is romantic in the extreme. A few miles below, for instance, the river expands into a charming lake (Lake Pepin) 25 miles long, and in some places five miles wide. This is naturally a favourite place of resort for those of the citizens who have a taste for boating amid exquisite scenery.

The river at St. Paul is spanned by two bridges. One of these—a girder bridge—is a very curious piece of engineering. It starts from the level of a high bluff on the city side, and ends on a level with the low bank opposite, where the bluffs lie some distance back. The bridge, therefore, forms a regular inclined plane. The roadway is on the top of one of the deep latticed girders, while in the next and subsequent spans it is level with the bottom of the girders. The arrangement is more convenient than elegant.

It is hardly necessary to remark, with regard to so new and rapidly-growing a city as St. Paul, that it has an eminently unfinished look. Very few of the streets are, as yet, built up regularly. The vacant plots are still numerous; but the activity displayed in the erection of new and substantial buildings, and in the substitution of brick and stone structures for the original frame buildings, is wonderful. And let no one suppose that these new erections of brick or stone are, in the main, "jerry-built" places, which will be but little more durable than the wooden shanties they replace. Such is not the case. I have seldom seen more substantial buildings than some of those which were recently finished or in course of completion last year. Many of the bricks used in them are a remarkably hard, smooth, close-grained sort. They are apparently of the best and finest clay, closely pressed and beautifully moulded; and in many cases the hard black cement in which they are laid stands out at the joints with that perfect squareness which is always suggestive of careful masonry and almost endless endurance. I had occasion to call at the offices of the

Chicago, St. Paul, Minneapolis, and Omaha Railroad, and I could not help noticing that all the internal fittings and furniture were of the same solid and substantial character as the outer walls. The officials of a great, old-established European company could not be more conveniently or comfortably housed than are the managers of this youthful concern in that very youthful city of St. Paul.

There are forty or fifty churches in the city, an Opera House as a matter of course, a Custom House, and a State Capitol, but none of the buildings are of sufficient importance to call for detailed notice. The architects will appear upon the scene in due course. The newspapers, indeed, were boasting last year that St. Paul was about to have a "million-dollar hotel," and a fair proportion of the million will no doubt be spent upon a "palatial" front. At present, the hotels are hardly up to the standard reached in other cities.

Minnesota abounds in lakes, and there are several in the neighbourhood of St. Paul to which visitors are accustomed to drive. The Minnehaha Falls, immortalized by Longfellow, are also near at hand, but these, though pretty, are generally admitted to be hardly worthy of the fame which the poet has secured for them. The Minnehaha Falls are on the Minnehaha River, which falls into the Minnesota River, an important affluent of the Mississippi, and the stream which gives its name to the State. The recurrence of the syllable "Minne" in the words Minnehaha, Minnesota, and Minneapolis will hardly have escaped notice. "Minne" is the local Indian word for "water," and it is only natural that it should turn up frequently in a district full of streams and lakes—the great gathering-ground of the Upper Mississippi. Minnehaha means "Laughing Water"—i.e., the water saying "ha, ha!" and a very pretty derivation that is. Minneapolis is a euphonious but mongrel word—partly Indian and partly Greek. It means "the city on or near the water," the second half of the name signifying "city," and being, in fact, the same termination that we find in "Constantinople," "Persopolis," "Neapolis," &c. The marrying of Indian with Greek to make the name of a city is, perhaps, hardly a proper proceeding; but the Americans have so many new names to invent that it would be unkind to be hard on them. I am not sure, moreover, that a nation which has invented such a tautological barbarism as "Cliftonville" would have any right to criticise the people of the great city of flour-mills even if they were to change its name to Minneapolisville.

I have already explained how the city of St. Paul obtained its name, but I ought, perhaps, to remark that the Americans have a curious knack, when speaking of the place, of throwing a strong emphasis on the first word. We talk about *Saint Paul*, emphasizing the second word; but the Americans say *Saint Paul* in a way which at first strikes a stranger as extremely odd.

Dr. Talmage, the famous Brooklyn preacher, lectured in St. Paul on the evening on which I was in the city, and I and my friend (whom I had rejoined at the Continental Hotel after my Lake Superior trip) went to hear him. I cannot honestly say I had my dollar's worth. It is, perhaps, only fair to remark that what I had heard of Talmage had prejudiced me against him. I had long known him as dogmatic and intolerant, as combining in his own person the most rigid orthodoxy in theology with (to put the thing mildly) the most remarkable smartness in business. I had yet to learn that he was a buffoon. Moreover, he lodged at our hotel, and I sat at dinner with him before starting for the lecture; and his hard, cold, self-import-

ant demeanour did not tend to raise him in my estimation. There was nothing genial about him. His lecture was on "Big Blunders," and was very characteristic of the man. It was, however, an address of which one could carry away but little, save in a note-book. I can now remember only two parts of it, but they are fair specimens of the "funny" portion. He began thus, with a rush, and a tremendous emphasis on the word "born":—"The man who never made a mistake has not yet been BORN. If he had been, he would have died right away." This is a sample of the "humour" of the address. Towards the close, he preached a little sermon on the duty incumbent on every man to stick to his own particular kind of work, and not to meddle with the work of others. It was, in short, a sermon on the text "Let every shoemaker stick to his last." In enforcing this lesson, he addressed himself first to one profession and then to another, advising them each, in turn, not to meddle with this or that thing which lay outside their proper sphere; and he wound up with this remarkable exhortation: "And you preachers, stick to your pulpits, and don't go rushing about the country lecturing." The "joke," of course, was that Talmage was himself at that moment running about making hundreds of dollars nightly by his lectures. Such "humour" might, possibly, be in its place in the mouth of a circus clown; but I failed to see anything but grotesque impudence in it when it came from a famous preacher who was supposed to be giving serious advice about serious matters. I could not help asking myself the question: "How far is this man in earnest about anything?" I breakfasted with him next morning, but made no further progress towards admiring him.

My time in Minneapolis was very short—a circumstance which I have ever since regretted, for there is a great deal that is both interesting and beautiful in and around the city. The place probably owes its existence—it certainly owes its prosperity—to the fact that the water of the Mississippi there tumbles over a ledge about 18 feet high. This fall is called St. Anthony's. It is just high enough to be useful; the body of water, the river being over 200 yards wide, is prodigious; and the formation of the banks below the fall is such as to facilitate the turning of the vast power to good account. The Minneapolitans have, indeed, made the Mississippi their slave, and the amount of work they get out of it is almost incalculable. The Father of Waters had, for untold ages, indulged in a joyous and graceful leap at this particular point; but the citizens have now put him into harness, and given him to understand that, if he will leap, he shall perforce leap to some purpose. But let us come to sober prose. What has happened to the Falls of St. Anthony is just this:—A score or more of immense flour mills (or, to use the American words, "flouring mills") have been built on the river bank, abreast of the falls, and through each of these mills an appreciable part of the water of the Mississippi is made to flow. It emerges from the mills 18 feet below the level at which it enters them, and in its descent through those 18 feet it puts forth the power of many thousands of horses. There is no other such collection of flour-mills in the world. They are not all of the same size and capacity, but I was informed on good authority that one of the largest of them is capable of turning out 5,000 barrels of flour every day. The grinding is not effected by means of circular stones, as in this country, but by iron rollers, the Americans having in

this, as in so many other matters, made a notable departure from the old lines. It will now be readily understood why Minneapolis is the greatest grain market north of Chicago. Wheat pours into the city from all parts of Minnesota, from Manitoba, from Dakota, and from portions of several other States, and having been turned into flour by the power derived from the great river, it is sent out in barrels to all parts of the country and to Europe. As there is no water-power in the neighbourhood which is at all comparable to that supplied by St. Anthony's Falls, Minneapolis has little to fear from any possible local rival, so long as the Mississippi continues to flow.

Rival cities, like Duluth, complain that Minneapolis exerts a great deal more influence in the grain market than is good for either the farmers or the public. It is alleged that the owners of the mills have formed themselves into a "ring," which is able, within certain limits, to fix the price both of wheat and of flour over a vast area. I do not pretend to be able to say how much truth there is in these charges. Knowing something of human nature generally, and a little of the Yankee variety of the article in particular, I am quite prepared to believe that, if the Minneapolis millers really possess anything like a monopoly, they are very likely to use it with a single eye to their own profit. But the opening of the Northern Pacific Railroad throughout must certainly have impaired whatever monopoly they once possessed. They are no longer the only available customers for the wheat grown in the districts traversed by that line. If the prices they offer do not please the farmers, the latter can now send their grain to Duluth, and there ship it to the Eastern States or to Europe.

The Falls of St. Anthony have been pretty completely spoiled by the mills. Not only do the huge buildings disfigure the bank, but in dry seasons they abstract nearly the whole of the water, and leave a mere dribble to go over the fall. The very fall has been protected by a sort of apron or curtain of wood, and that certainly does not add a picturesque feature to the scene. The finest thing left is the rapids above the fall. These, when the river is full, are very beautiful, as the bed of the river slopes down no less than 82 feet in the last two miles. A fine suspension bridge crosses the river a few hundred yards above the falls, and from that bridge a commanding view of the rapids is obtained. The small city on the opposite side of the river is called St. Anthony.

There never was such a case of "bringing grist to the mill" in wholesale fashion as at Minneapolis. The milling industry, with its wonderfully cheap power, is evidently one of the most lucrative things in the country, as a glance at the city shows. There is every evidence of wide-spread and abounding prosperity. The business streets are handsome, and already the roadways are being paved, London fashion, with blocks of wood "end on," laid on a substantial plank flooring. The only respects in which the paving differs from ours are these—the wooden blocks are of cedar, and they are round instead of square, the interstices being filled with rubble or concrete. Some of the streets of private residences have a particularly pleasant, comfortable look, and their avenues of shade trees were among the finest I saw. Minneapolis was, moreover, the first city I visited in which attempts were being made to illuminate the streets by means of powerful electric lights on the tops of tall masts. But as I found this system in full use in a still newer, still more western, and still more remarkable place than the City of

Flour Mills, I will postpone a description of it for the present.

ST. PAUL TO OMAHA.

To the West, to the West; to the land of the free;
Where the mighty Missouri rolls down to the sea.

So sang Charles Mackay. And so should I have sung, if singing were one of my accomplishments, when we stepped aboard the train at St. Paul, for the long run across the prairies to the city of Omaha—the point at which the chief railroads from the East connect with those running on towards the Far West. But Mackay's stirring ballad may, like the Psalms at church, be "said or sung"; and, as I could not sing it, I "said" it, in the hope of arousing my companion's enthusiasm and my own.

[By the way, the "mighty Missouri" does not "roll down to the sea," strictly speaking. It rolls into the Mississippi. But some allowance must be made for poets when they have unmanageable Indian words to marshal. It is the mighty Mississippi which really "rolls down to the sea," and Mackay no doubt made desperate attempts to fit the name of the Father of Waters into his verse. Failing in that, he did the next best thing, remembering perhaps that it was just as reasonable to call the Mississippi a tributary of the Missouri as to regard the former as the main stream.]

St. Paul seemed to us fairly far west, as we looked over the map and back upon the long journeys of the previous five weeks; but as yet we were not nearly half-way across the continent, and we were now fairly starting for Denver, with the intention of making the whole run of nearly a thousand miles without any other halt than that imposed upon us by the railway companies. The first stage of this journey was from St. Paul to Sioux City, a distance of 270 miles, by the Chicago, St. Paul, Minneapolis, and Omaha Railroad. The line traverses the south-west corner of Minnesota and the north-west corner of Iowa. For some distance after leaving St. Paul, the railway follows the valley of the Minnesota River, which is well wooded; but presently the river diverges to the right, the wood becomes gradually less and less abundant, and the line at last emerges upon the open, treeless prairie. This was the first time I had passed through a prairie country, and the experience was an interesting one. The general notion that a prairie is a boundless, treeless plain is not strictly correct. Treeless it is, no doubt; for one may travel for hours, and see not a tree as tall as one's self, except here and there where a farmer has planted a row in a painfully straight line as a shelter for his homestead. Most farmers do plant in this way, and it is a pity they do not do so on a much larger scale; for wood is required, not only to supply fuel and timber, but also to break the monotony of the landscape and to modify the climate. But the prairie is seldom a plain, in the strict sense of the word. It is, indeed, no more a plain than Salisbury Plain is. Like Salisbury Plain, it usually consists of gentle, regular, rolling undulations, like a long unbroken swell on the ocean. The undulations are usually more gentle than those of Salisbury Plain, but they are equally well defined. So slight is the gradient that the railways often follow the ups and downs for scores of miles at a stretch, without either embankment or cutting. The line has apparently been laid on the hard surface of the prairie, and a little ballast has completed the business of construction. The

traveller discerns clearly enough, without looking out of the car, where the inclines begin and where they end. The varying speed of the train keeps him accurately informed. For half the day, the train is alternately climbing and running down these slight undulations, and the down-hill running is naturally faster than the up-hill.

The railroads which cross the prairies have to be carefully protected against snow-drifts. On those vast treeless tracts, the wind sweeps along unopposed by a single natural obstacle which could break its force. If snow is falling or has recently fallen, it is carried along by the blast until it reaches some slight hollow or some solitary group of buildings. It fills up the one, and is piled in mighty drifts against the other. As long as the railway is on the same level as the prairie, or is raised slightly above that level, it has nothing to fear from drifting snow. In the latter case, indeed, the wind, when there is any, keeps the line clear, and the snow is piled up on the leeward side of the embankment. But when the line is in a cutting, however slight, the case is different. The drifting snow will very soon fill the cutting to the very top, and all traffic will be suspended until it thaws or is cleared away. Every cutting, therefore, has to be protected on the side from which the winter winds generally blow, and sometimes on both sides. The protection usually consists of a strong wooden barrier, not entirely closed, but with the longitudinal strips somewhat nearer together than those of an ordinary fence. As the pressure of the drifted snow is sometimes great, these fences are seldom left to maintain the perpendicular by their own strength. Either they are supported by stout props on the side nearest the cutting, or the different sections of the fence are made to support each other in a rather ingenious way. This end is attained by making one section incline towards the railway and the next in the opposite direction, and so on, every section being firmly connected at its top corners with its next neighbours. Each section inclining towards the line is thus firmly held up at both ends by sections which incline the other way, and a stronger barrier for the purpose in view could not be desired. Sometimes, when the direction of the prevalent wind is diagonal to the course of the railway, each section of the fence stands by itself, duly propped up, with one end half turned away from the cutting. These precautions against snow drifts may appear very obvious and simple, but they are evidently the outcome of long and costly experiences; and where a line is a good deal below the level of the surrounding country, the construction and maintenance of the barriers must prove a considerable burden.

The prairie country traversed by the line by which we travelled to Sioux City and Omaha is a very fertile district, which is being rapidly settled. The harvest was in progress when we passed through it, and we saw some very fine crops of wheat, maize, and other grain. Where the prairie was not yet broken up, the natural grass had been largely cut for hay. This looked in some places as fine as the best English meadow hay, and I was told it could be had, ready cut and dried, for 5s per ton by those who chose to collect it at their own expense.

A gentleman who travelled with us from St. Paul, and who alighted at a small place in Iowa, where he said he had a large farm, gave me some information about some of the settlements in his own neighbourhood. One of these, he told me, belonged to a sharper who lived and grew fat on English flats. His plan

was to advertise in this country for the sons of gentlemen and well-to-do farmers, undertaking, in return for a good round sum as premium, to initiate them into the mysteries of prairie farming, and, when desired, to find eligible farms for them. The usual glowing representations were made, and the young fellows who were thus caught went out in the belief that they had discovered a very pleasant and easy way of making fortunes. The reality proved different from the anticipation, and only a few of the hardiest and most determined of them stuck to the work more than a few weeks. The smart advertiser, in short, seldom had to give much in return for the handsome premium; and in those cases in which he supplied his pupils with farms, the young fellows usually threw them up in disgust, and he secured them on his own terms to sell to the next set of flats. Men who are able and willing to work, and who do not object to deprive themselves for a few years of all the luxuries and some of the comforts of life, can and do prosper in the district I am writing about; but the class of young men for whom this Iowa sharper baited his hook are, as a rule, useless out there, and nothing but disappointment can result from their going out. There should be no illusions on this subject. The young man who has hitherto only played at farming in England, and the greater part of whose time has been spent in riding, coursing, shooting, darning, hanging about the hotels of the nearest town, and otherwise taking things easily and pleasantly, must have an amazing amount of the right sort of stuff in him if he is capable of turning his back upon his past, and facing in grim earnest the career of a western farmer. There are such young fellows, no doubt, and I would take off my hat to them as an expression of profound respect if I only knew them when I met them; but I am afraid their name is not "Legion."

One remarkable feature about these western settlements is the way in which settlers of the same nationality very often cluster together. In one place, you find that nearly all the people are Germans, while in another place Norwegians predominate. The Iowa gentleman to whom I have referred told me that in his neighbourhood there was a settlement consisting entirely of Russians, and in another part of the country I was told that there was a colony of Highlanders. (Lowland Scotch and Ulstermen are common enough, but Highland settlers are rare.) Go where they may, the men of the Highlands, of course, carry with them their bagpipes, their stern theology, including the "saw-bath," and their "whusky." I heard some droll but characteristic stories about one of their settlements.

The settlers wanted a church, but a dispute arose as to the site. Each man wanted the building erected on or near his own property, and for a long time no settlement of the dispute appeared possible. At last, a meeting was called to decide the question, and when the people came together, it was found that one of the farmers, who was particularly anxious to have the kirk on his land, had brought with him a small cask of whisky with which to "influence" the votes. There was a regular shindy, and it was at last decided to call in several ministers from the neighbourhood to assist in solving the question in dispute. The ministers duly put in an appearance at the next meeting, but even then the dispute ran so high that one or two of the disputants flung off their coats, stripped up their shirt-sleeves, and prepared to decide the position of the church by an irregular P.R. performance. The ministers had, in fact, some difficulty in preventing a free fight.

To fight (on any "lawful day") over the site of a church is, it seems, allowable; but to do any kind of domestic work on the "Sawbath" is as wicked in the American backwoods as it is to despatch herrings from a Highland railway station to Glasgow on that day—a sin which the pious people of Strome Ferry recently prevented by storming the station and knocking a number of porters and policemen on the head. In the Highland settlement where the site of the church caused so fierce a contest, a man once lay ill in bed. A lady belonging to his own religious body visited him one Sunday, and she very soon discovered that the poor fellow was really in want of nourishment. The only thing in the way of food in the house was some eggs, and with some difficulty she obtained his consent to boil him one or two. She proceeded to "build" a fire, and had made some progress with her task, when the sufferer suddenly remembered that it was Sunday. He instantly stopped her, and, in spite of all her entreaties, he refused to allow her to do anything further towards relieving his necessities, and grimly resigned himself to starve on till Monday dawned.

SIoux CITY.

"Sioux" looks like an ugly word to pronounce, but it is not. The Americans simply shorten it to "Soo." The city, of course, owes its name to the famous tribe of Indians which was once monarch of all it surveyed in that region.

Sioux City is on the Iowa bank of the Missouri River. The opposite shore is the eastern extremity of the great State of Nebraska. So far as I could judge, the place had a population of about 12,000 or 15,000, but this is evidently growing at a very rapid rate. The numerous fine blocks of business premises in course of erection bore eloquent witness to the increasing prosperity of the place. Sioux City is, I should say, another place with a great future before it. It is already an important railway centre, and the rapidly-developing districts of Western Iowa and North-east Nebraska look to it as their commercial metropolis. It is, as I have said, on the banks of the Missouri, and thus possesses all the advantages of a river navigation which extends over thousands of miles. At present, the Missouri is not bridged at Sioux City, and passengers for the Nebraska lines have to cross in ferry steamers.

Our train did not proceed beyond Sioux City, and we were, therefore, compelled to spend a night there. As we were to start for Omaha by another train in the small hours of the morning, we accepted the invitation of the proprietor of a so-called "hotel" at the station to put up at his house. I cannot conscientiously recommend anybody else to do the same. The "accommodations" were very poor; and as the "hotel" (a wooden one) formed part of the station buildings and looked out upon the platform, there was not much sleep to be had, especially as the heat and the stuffiness of the small rooms compelled us to throw our windows wide open.

By five o'clock in the morning, we were again on the move towards Omaha. A Sioux City daily paper was on sale on the platform when we left, and from that we learned that, shortly before midnight, Wah Lee had murdered Ah Sam in the horrible but approved fashion in which Chinese officials are graciously permitted to depart this life when they have rendered themselves amenable to censure. Both the murderer and the murdered were in the laundry line in the city, and it was believed that Lee had favoured Sam with the "happy dispatch"—that is to say, had ripped him up—for the sake of some money the latter

had about him. It is only fair to say that horrible crimes of this sort are comparatively rare among the Chinese. As a rule, they are a quiet, law-abiding people, who patiently suffer a vast amount of ill-usage at the hands of native American and Irish ruffians.

OMAHA.

We arrived at Council Bluffs early in the forenoon, and, after a half-hour's stoppage, crossed the great Missouri bridge in a short connecting train to Omaha. Having a couple of hours to spare before the departure of the Denver train, we mounted a street car and went into the city. Here, again, we found all the usual evidences of rapid growth in population, trade, and general prosperity. Nobody who has ever noticed the position of Omaha on the railway map of the States will be surprised at this. It was at Council Bluffs, on the opposite bank of the Missouri, that the first railway from the eastward reached the river, and it was, therefore, perfectly natural that the first railway westward should make Omaha its starting-point. The Chicago and North Western was the first Company to connect Chicago with the Missouri; but the Rock Island, the Burlington and Quincy, the Chicago and Alton, and other Companies have since constructed competing lines either to Omaha or Kansas City—the two chief crossing-places on the Missouri. The distance from Chicago to Omaha is about 500 miles, and the time occupied in the journey is just about a day and a night. Once across the Missouri at Omaha, the traveller may fairly regard himself as on the threshold of the Far West; and if he happens to pick up one of the city newspapers, he at once finds reason to believe that the peculiarities which more or less mark all American journals are heightened and exaggerated west of the great river. Omaha, for instance, has a newspaper called the *Daily Bee*, and a very busy, outspoken insect it is. It is, moreover, scrupulously virtuous and utterly beyond the reach of corruption. So, at least, it says, and who can speak as to its own secret motives with greater authority? If it does not know what its virtues are, who should?

I have before me the *Daily Bee* of August 17, 1883, the day on which I was in Omaha, and I cannot resist the temptation to cull from it a few specimens of its remarkably candid remarks on city affairs. The following it says under the heading (in capitals) "The Rogues' Council":—

"This paper is in the habit of calling a spade a spade and a rogue a rogue. And when it calls a man a rogue, it means just what it says, nothing more and nothing less. When Dr. Cushing dined the city council on their way to Burlington three years ago, and the council, on their return, undertook to perpetuate a bare-faced swindle upon our tax-payers, this paper did not mince matters. It denounced Hascall as a rascal, and Kaufman as no better than Hascall. It went further than that. At the risk of losing the city printing, which had been virtually awarded to it at that time, it boldly took the jobbers by the throat, and never let go its hold until they were routed, horse, foot, and dragons. It was an eight months' fight, beginning in the council, continuing through the courts, and finally ending in the complete overthrow of the rogues at the polls. Of course, *The Bee* lost the printing, but it retained the public confidence, and saved the city several hundred thousand dollars. The council three years ago was a disgrace to the city, but it only undertook one big job in defiance of decency and public protest. The present council started out with very fair promise, and turns out a good deal worse than the council of three years ago, that was kicked out for its rascality. It isn't content with one

big job, but it begets little and big steals at every meeting. When *The Bee*, in the interest of the property-owners and tax-payers, denounced the sandstone contract as a fraud, and expressly charged (what it can establish to-day) that a thousand dollars had been offered to at least one councilman to support that job, we knew well enough that the rogues, with Hascall at their head and Kaufman at their tail, would swindle the tax-payers by refusing to award us the printing. We knew that no matter how low our bid would be, they would vent their personal spite by refusing to award it. To show them up in their true light, we made a bid of 50 per cent. below *The Republican*, and considerably lower than the little dish-rag that is being circulated in our streets as a newspaper. It turned out as we expected. The council rejected the bid of *The Bee* without giving any reason, and awarded the registration lists to an irresponsible and readerless concern that had run barely six weeks, at three cents per line, for which *The Bee*, under its bid, could only charge 1½ cents per line. This is not only petit larceny against the taxpayers, but it shows what small-patter pick-pockets we have in the council. It is not a very surprising fact that the same fellows who voted for sandstone voted for this little printing fraud."

In another column the *Bee* says:—

"The council is going through the farce of inviting proposals for the legal advertising of the city. The *Bee* will be again a bidder, just to make the rogues show their hand once more. Possibly we may ask the courts to say whether the taxpayers have any rights, even in such a little matter."

This *Bee* can evidently sting; indeed, what would be the use of its being a *Bee*, if it couldn't? Still, I fancy this brutally frank sort of journalism would rather startle English readers. We journalists on this side no doubt have our little differences at times, and occasionally do a little at calling each other names; but I trust we never so far forget ourselves as to refer to a contemporary (whether small or large, respected or otherwise) as "the little dish-rag which is being circulated in our streets as a newspaper." But then, of course, a writer who always "calls a spade a spade" is equally bound to call a dish-rag by its right name.

Omaha is the largest city in Nebraska, but it is not the capital of the State. The population in 1865 was about 15,000. In 1880, it was over 30,000, and it is now probably 35,000. Its prosperity is, as I have already remarked, mainly due to its position as a great meeting-place of great railways; but it has, besides the vast machine shops, car works, and foundry of the Union Pacific Railway, large breweries, distilleries, linseed-oil works, smelting works, stock yards, and pork-packing establishments. Omaha is, in fact, "getting up and getting" in a fashion which ought to be satisfactory to the most go-ahead Yankee. It is difficult to suggest any combination of circumstances which would be likely to check its progress seriously. The principal railways have made it the chief crossing-place of the Missouri; and as they have spent £300,000 on their bridge, they are hardly likely to abandon the place in favour of some other. The point where all the principal land routes cross the great watery highway of the continent cannot fail to be one of vast and increasing importance, especially as it is in the centre of an immense prairie district which is being rapidly brought into cultivation. The importance of the navigation of the Missouri may be gathered from these few facts and figures:—Above Omaha, the river is navigable for considerably over 2,000 miles—right away, in fact, to the centre of Montana. Downwards to the sea, the distance is at least 1,600 miles. But this is only the main stream of the Missouri and Mississippi. Their tributaries also are navigable for thousands of miles. The longest tributary of the

Upper Missouri is the Yellowstone, whose head-waters are in and around the wonderful Yellowstone National Park. From the source of this river to the Gulf of Mexico, by way of the Missouri and the Mississippi, the distance is somewhere about 5,800 miles. This vast river system is navigated by a fleet of more than a thousand steamers of all sorts and sizes. A grander or more valuable natural highway does not exist in any part of the world.

Omaha possesses nearly a score of hotels and considerably more than a score of churches, and it supports three daily newspapers, of which the busy and virtuous *Bee* aforesaid is one, and the "dish-rag" to which the *Bee* referred so contemptuously in the article I quoted, is another. The city contains, moreover, several important public buildings, including the chief offices of the Union Pacific Railroad and some very costly and handsome educational establishments.

The circus is a great and popular institution in America, and people of all ages and classes run to see it with all the enthusiasm and artlessness of children. "As good as a circus!" is a common saying, which is understood to express the highest appreciation of something striking and amusing. It is equivalent to our "As good as a fair!" A circus (not Barnum's gigantic concern) was in Omaha on the day of my visit, and the gaudy procession happened to pass the office of the Union Pacific Railway while I was in the building, conversing with some of the officials. The eagerness and agility with which the said officials jumped from their seats and rushed to the doors and windows at the first sound of the band were as surprising as they were amusing. I was about the only person left in the place; and, as far as I could see, there was nobody to prevent my walking off with any odd millions' worth of scrip or tickets that happened to be "lying around."

THE PACIFIC RAILWAY.

As Omaha is the starting point of the 1,916 miles of railway which, under the names of the Union Pacific and the Central Pacific, connect the Missouri River with the Pacific coast at San Francisco, this is an appropriate time to give a brief history of that gigantic undertaking. The spanning of the continent with railway lines has now become rather a common-place piece of business, for there are now no less than four separate routes open, or about to be opened, between the two oceans. But no multiplication of parallel lines can ever rob the pioneers of trans-continental railway-making of their hard-earned honours; nor, I may add, can any other line ever surpass in interest the one which renders the wonderful mountain scenery of Colorado accessible, which carries the traveller to Denver and the City of the Saints, which scales the Sierra Nevada amid the most ravishing scenery and by means of the boldest of engineering, and which finds its western terminus in the great and wealthy city which has sprung into existence beside the Golden Gate. The promoters and engineers of the pioneer route showed the world how mountains and deserts could be traversed, and other promoters and other engineers have "entered into their labours." The difficulty lay in doing the thing the first time—in satisfying capitalists and Governments that the "impossible" could be accomplished, and, having secured their aid, in carrying the work through. The thing, once done, became easy, just as any apparently impossible trick becomes easy as soon as the performer shows how it is accomplished.

The gold discoveries in California, and the consequent and rapid growth of population and wealth on the Pacific coast, led soon after the year 1850 to the serious discussion of the question of railway communication across the continent. In 1853, Congress made a grant of money for the purposes of surveys, and no less than nine different routes were duly surveyed and reported upon. It was not, however, till 1862 that any decisive step was taken. Congress in that year granted a charter to the Union Pacific Railroad Company, fixing the capital at a hundred million dollars, and giving the Company fourteen years in which to complete the work. About the same time, the Central Pacific Railroad Company was organised in California. This Company made a beginning by buying up the Western Pacific, a line which had already been opened from San Francisco to Sacramento, and which made a start in the right direction—viz., towards the Sierra Nevada range of mountains.

It was not until 1865 that the Union Pacific Company got fairly to work with the construction of their line; but operations, once begun, were continued at an ever-accelerating speed. The fact is, the construction soon became a race between the Central Pacific, working from the Californian end, and the Union Pacific, starting from the Missouri. And the race was one which involved something more solid than the honour of rival engineers. Congress had made grants of vast tracts of land to the Companies alongside the proposed route. These grants amounted to something like twenty millions of acres, or considerably more than half the area of England and Wales, and whichever Company completed the larger number of miles would be entitled to the larger share of the acres. Stimulated by their knowledge of this fact, the two Companies worked with almost superhuman energy, until the rate of progress attained at both ends was such as would have been declared impossible only a few months before. Speaking of this remarkable race, the *Pacific Tourist* says:—

"Day after day, the average rate of building rose from one to two, three, and five miles. Many will remember the daily thrill of excitement as the morning journals in the East made the announcements of so many more miles nearer the end; and as the number of completed miles, printed in the widely-circulated advertisements of the Union Company, reached 1,000, the excitement became intense, as the rival roads were now fairly aglow with the heat of competition, and so near each other. In previous months there had existed a little engineering rivalry, good-natured, but keen, as to the largest number of miles each could lay in one day. The Union Pacific men laid one day six miles; soon after the Central followed suit by laying seven. The Union Pacific retaliated by laying seven and a-half; to this the Central sent the announcement that they could lay ten miles in one day. Mr. Durant, the vice-president, sent back a wager of \$10,000 that it could not be done. The pride and spirit of the Central Pacific had now been challenged, and they prepared for the enormous contest, one of extraordinary magnitude and rapidity. The 23rd day of April, 1869, was selected for the decision of the contest, as there then remained but 14 miles of track to bring a meeting of the roads at Promontory Point. Work began; the ground had already been graded and ties placed in position, and at the signal the cars loaded with rails moved forward. Four men, two on each side, seize with their nippers the ends of the rails, lift from the car and carry them to their place; the car moves steadily along over the rails as fast as they are laid. Immediately after follows a band of men who attach the plate and put the spikes in position; next a force of Chinamen who drive down the spikes solid to their homes, and last another gang of Chinamen with shovels, picks, &c., who ballast the track. The rapidity of all these motions, which required the most active of exercise and alert movements,

was at the rate of 144 feet of track to every minute. By 1.30 p.m., the layers had placed eight miles of track in just six hours. Resuming work again, after the afternoon rest, the track-laying progressed, and at 7 p.m. exactly, the Central men finished their task of 10 miles, with 200 feet over. Mr. James Campbell, the superintendent of the division, then seizing a locomotive ran it over the 10 miles of new track in 40 minutes, and the Union men were satisfied. This was the greatest feat of railroad building ever known in the world, and when it is known how vast were the materials required to supply this little stretch of 10 miles, the reader is fairly astonished at the endurance of the labourers. To put this material in place, over 4,000 men had been constantly employed. The labourers on that day handled 25,800 cross-ties, 3,520 iron rails, 55,000 spikes, 7,040 fish-plates, and 14,080 bolts, the weight of the whole being 4,362,000 pounds. Upon both roads, for a year previous, there had been remarkable activity. A total force of 20,000 to 25,000 workmen all along the lines, and 5,000 to 6,000 teams, had been engaged in grading and laying the track or getting out stone and timber. From 500 to 600 tons of materials were forwarded daily from either end of the lines. The Sierra Nevada suddenly became alive with wood-choppers, and at one place on the Truckee River 25 saw-mills went into operation in a single week. Upon one railroad 70 to 100 locomotives were in use at one time, constantly bringing materials and supplies. At one time there were 30 vessels en route from New York, via Cape Horn, with iron, locomotives, rails, and rolling stock, destined for the Central Pacific Railroad, and it is a curious fact that on several consecutive days more miles of track were ironed by the railroad companies than it was possible for an ox-team to draw a load over. And when, at last, the great road was completed, the fact suddenly flashed upon the nation that a road once so distrusted, and considered too gigantic to be possible, was constructed an actual distance of 2,221 miles in less than five years, of which all but 100 miles was done between January 1, 1866, and May 10, 1869—three years, four months, and ten days."

The ultimate meeting or "marriage" of the two lines is thus described by the same writer:—

"Upon the 10th of May, 1869, the rival roads approached each other, and two lengths of rails were left for the day's work. At eight a.m. spectators began to arrive; at quarter to nine a.m. the whistle of the Central Pacific Railroad is heard, and the first train arrives, bringing a large number of passengers. Then two additional trains arrive on the Union Pacific Railroad from the East. At a quarter to 11 a.m., the Chinese workmen commenced levelling the bed of the road with picks and shovels, preparatory to placing the ties. At a quarter past 11 the Governor's train (Governor Stanford) arrived. The engine was gaily decorated with little flags and ribbons—the red, white, and blue. The last tie is put in place—eight feet long, eight inches wide, and six inches thick. It was made of Californian laurel, finely polished, and ornamented with a silver escutcheon, bearing the following inscription:—

"The last tie laid on the Pacific Railroad, May 10, 1869."

"Then follow the names of the directors and officers of the Central Pacific Company, and of the presenter of the tie.

"The exact point of contact of the road was 1,085 1/2 miles west from Omaha, which allowed 600 miles to the Central Pacific Railroad, for Sacramento, for their portion of the work. The engine Jupiter, of the Central Pacific Railroad, and the engine 119, of the Union Pacific Railroad, moved up to within 30 feet of each other.

"Just before noon, the announcement was sent to Washington that the driving of the last spike of the railroad which connected the Atlantic and Pacific would be communicated to all the telegraph offices in the country the instant the work was done, and instantly a large crowd gathered round the offices of the Western Union Telegraph Company to receive the welcome news.

"The manager of the Company placed a magnetic ball in a conspicuous position, where all present could witness the performance, and connected the same with the main lines, notifying the various offices of the country that he

was ready. New Orleans, New York, and Boston instantly answered 'Ready.' In San Francisco the wires were connected with the fire-alarm in the tower, where the heavy ring of the bell might spread the news immediately over the city as quick as the event was completed. Waiting for some time in impatience, at last came this message from Promontory Point, at 2.27 p.m.:—

'Almost ready. Hats off; prayer is being offered.'

"A silence for the prayer ensued; at 2.40 p.m., the bell tapped again, and the officer at the Promontory said:

'We have got done praying; the spike is about to be presented.'

"Chicago replied: 'We understand; all are ready in the East.'

"From Promontory Point: 'All ready now; the spike will soon be driven. The signal will be three dots for the commencement of the blows.'

"For a moment, the instrument was silent, and then the hammer of the magnet tapped the bell, one, two, three, the signal. Another pause of a few seconds, and the lightning came flashing eastward, 2,400 miles to Washington; and the blows of the hammer on the spike were repeated instantly in telegraphic accents upon the bell of the Capitol. At 2.47 p.m., Promontory Point gave the signal, 'Done'; and the great American Continent was successfully spanned. Immediately thereafter, flashed over the line the following official announcement to the Associated Press:

"Promontory Summit, Utah, May 10.—THE LAST RAIL IS LAID! THE LAST SPIKE IS DRIVEN! THE PACIFIC RAILROAD IS COMPLETED! The point of junction is 1,086 miles west of the Missouri River, and 690 miles east of Sacramento City.

"After the rival engines had moved up toward each other, a call was made for the people to stand back, in order that all might have a chance to see. Prayer was offered by Rev. Dr. Todd, of Massachusetts. Brief remarks were then made by General Dodge and Governor Stanford. Four spikes were then furnished—two gold and two silver,—by Montana, Idaho, California, and Nevada. They were each about seven inches long, and a little larger than the iron spike. Dr. Durant stood on the north side of the tie, and Governor Stanford on the south side. At a given signal, these gentlemen struck the spikes, and at the same instant the electric spark was sent through the wires, east and west. The two locomotives moved up until they touched each other, and a bottle of wine was poured, as a libation, on the last rail.

"Immediately after the ceremonies, the laurel tie was removed for preservation, and in its place an ordinary one substituted. Scarcely had it been put in its place, before a grand advance was made upon it by the curiosity seekers and relic hunters, and divided into numberless mementoes, and as fast as each tie was demolished and a new one substituted, this, too, shared the same fate, and, probably, within the first six months, there were used as many new ties. It is said that even one of the rails did not escape the grand battery of knife and hack, and the first one had soon to be removed to give place to another."

The scene thus described must have been extremely striking and dramatic, especially as the place where it was enacted was a dreary, inhospitable waste, near the northern shore of the Great Salt Lake. The Americans were fully alive to the vast importance of the transaction, and, as we have seen, they celebrated it in a thoroughly characteristic fashion. The real nature and significance of the work they thus completed will not be fully realised by the reader until I have described the marvels of the railway somewhat in detail, as I shall do as I go along, and until I have endeavoured to convey some adequate conception of the wealth and importance of the magnificent State, which—hitherto reached from New York by a voyage of 12,000 or 14,000 miles, or a toilsome march of more than 3,000 miles over prairie, desert, and mountain—was thus linked by the iron road to the great group of commonwealths with which it was politically associated.

ACROSS THE PRAIRIES TO DENVER.

We left Omaha at noon on August 17th, for the long run across the prairies to Denver. The distance is 569 miles, and the time occupied 19 hours. The speed, therefore, averages almost exactly 30 miles an hour—a fact which will, perhaps, surprise many of my readers; for it is, I find, the general impression in this country that travelling in the Western States is invariably a very slow business.

Before starting, we looked after the inner man. In connection with this important matter a rather amusing episode occurred, illustrating once more the persistency with which Englishmen cling to their home habits and institutions, however far they may roam. My companion asked the man at the station refreshment counter whether he could not let him have some bread and cheese, remarking that he would rather have that than any of the eatables displayed on the counter. The attendant said: "No, we don't keep it." A moment afterwards, however, an idea struck him. "Are you an Englishman?" he asked of my friend. "I am," was the ready reply. "Then you shall have what you want," said the attendant; "for I am an Englishman too, and I have here under the counter some bread and cheese and beer for my own luncheon. You shall share it with me." And share it that pair of Englishmen did; and so pleased was the attendant at having a fellow Britisher to partake with him of the national fare that he firmly declined to accept a cent by way of payment.

And now for the prairie—nearly 600 miles of it without a break. The train no sooner starts from the Omaha depot than it enters on a rather steep incline, and in the first three miles rises 176 feet. It then descends gently, and at the end of another 15 or 20 miles again reaches the same level as Omaha, which, by the way, is about 1,000 feet above the sea. About 35 miles from Omaha, the line fairly settles down into the valley of the Platte, and from thence all the way to Denver it is hardly out of sight of that river. The Platte is one of the tributaries of the Missouri. It is made up of two streams, one of which drains the Rocky Mountains of northern Colorado, while the other renders a similar service to the Wyoming section of the same great chain. The sources of the northern arm of the Platte must be more than a thousand miles from the point where the stream enters the Missouri, near Omaha. The Platte is wide as well as long, but it is very shallow, and almost useless for purposes of navigation. In dry seasons, indeed, it shrinks enormously in bulk, and the greater part of its wide, flat bed is then waterless. It is a "shifty" river, difficult to deal with, and, although shallow, dangerous to ford except at the established crossing places.

The Union Pacific Railway Company's land grant included nearly half the valley of this river, from Omaha right back to the Rocky Mountains; for, as I have already stated, the railway runs parallel with and nearly close to the river nearly all the way, and the Government grant consisted of every alternate square mile in a belt of prairie 40 miles broad—i.e., 20 miles on each side of the line. At the eastern end, the whole belt is pretty generally settled, and settlements of more or less importance are scattered at intervals all along the line. But there are millions of acres of splendid land still undisposed of, and the railway belt alone has still ample room for hundreds of thousands of settlers. The soil is extremely fertile, and the price of farms ranges as low as three dollars (12s 6d) per acre. The time is undoubtedly com-

ing when the valley of the Platte will be one of the most thickly-peopled and prosperous of the agricultural regions of the States. The lower part of the valley is a great grain-producing district, while the upper (or western) part is one of the finest and most extensive grazing regions in the world.

When the Union Pacific line once gets fairly alongside the Platte, at a point 30 or 40 miles from Omaha, it begins to rise. The ascent is gradual, but continuous and unbroken, and by the time Denver is reached, the rails are more than 4,000 feet above Omaha. Whereas the latter place is only about 1,000 feet above sea-level, Denver is 5,203 feet above it, or almost exactly a mile. The ascent is so gentle, and so evenly spread over the whole 19 hours of the journey, that the traveller is entirely unconscious that he is ever going up—up, unless he happens to be carefully studying the Company's time-table as he flies. This time-table is a model of what such a table should be. It is a sheet nearly four feet long, the whole of one side of which is occupied by a handsome coloured railway map of the northern half of the States, representing the whole width of the country from ocean to ocean, and showing most clearly the connection of the Union Pacific with all its allies and neighbours. The time-tables fill the other side of the sheet, which folds up into something like book size. This is the regulation shape for American time-tables, which, indeed, are technically known as "folders." But the Union Pacific tables contain something more than the figures representing the stoppages of the trains and the distances between stations. They indicate which are "eating stations"—that is, the places where the trains stop for meals. They show the population of every city, town, and village on the line possessing a station—unless, indeed, the place has less than 50 people. Further, these time-tables state the exact elevation of every station above sea-level. The passenger who possesses one is, therefore, kept posted up as to the progress which he is comfortably making skyward. The regularity of the ascent is very remarkable. Here, for instance, is a specimen of how the figures read:—North Platte, 2,787 feet; O'Fallon's, 2,871; Alkali, 3,042; Ogallala, 3,195; Big Spring, 3,350; Denver Junction, 3,442. In scarcely a single instance is a station lower than the next station westward. The average rise is only 8 feet per mile, or 1 in 660—a gradient which is imperceptible. But a 19 hours' run, even on this gentle slope, lands the traveller in a city which stands at a level of nearly 1,000 feet above the top of the highest mountain in Great Britain.

I had already seen something of a prairie country between St. Paul and Omaha; but these vast Nebraska plains, stretching away from the Platte towards a distant range of bluffs on the north, have a character of their own. They are less undulating than those of western Iowa. The eye, therefore, commands a wider range of view, and the vastness is more impressive. Study as often as one may the amazing figures which represent the length and breadth and area of these plains, the reality is never fully realised until they are crossed. The traversing of them, even at railway speed, gives one new conceptions of immensity. What, then, must have been the impressions of those who, in pre-railway days, plodded along, in the company of their slow but patient ox teams, through whole weeks and months of weariness, towards some distant goal in the Far West—the mines of Nevada or California, or the Mormon Paradise on the shore of the Great Salt Lake?

The ride over the plains was, in the early days of the railway, more lively and interesting in some respects than it is now. Indians and wild beasts (the Americans would say "and other wild beasts") were then more numerous, and the chances of being robbed by a boarding party of desperadoes was considerably greater than it is at present. The increase of white settlers, the operations of sportsmen whom the railway carries out into these hunting-grounds, and possibly the mere presence of the railway itself, have driven the buffalo, the elk, and the other large "game" back into the wilds, where, for a short time longer, they may rest undisturbed. The tourist who expects to see from the railway vast numbers of buffaloes grazing on the prairie, or herds of silly deer racing along the line in front of the approaching train (as represented in certain pictures I have seen), will probably be doomed to disappointment. Mr. Sala, in his last book on America, describes the unmitigated disgust with which an American fellow-traveller of his discovered that there was "nary Injun," "nary buffalo," not even a solitary "grizzly," to be seen, and how the disappointed one vented his indignation on things and persons generally. I cannot say that I expected to see either wild Indians, buffaloes, or bears; but I was hopeful of seeing a few prairie-dogs' "towns," as I had been told that these are still to be found alongside the railways.

The so-called prairie dog is a comical little creature of the marmot kind, which lives in large numbers in labyrinths of burrows called "towns." The Indians call the prairie dog *Wish-ton-wish*, a name which is supposed to represent the sound made by the animal. His body is about a foot long, and his tail about a couple of inches. He has long whiskers, but his ears are little more than a couple of holes. He is generally seen standing over the entrance to his burrow on his hind legs, with his fore legs hanging down like those of a dog in the act of begging. Hundreds of these "dogs" may be seen thus standing over their holes; and at the slightest suspicious noise or movement, they disappear into their burrows, head-first, with the speed of lightning. One, it is said, sometimes remains above ground as a sort of sentinel. Some curious superstitions are rife as to the household companions of *Wish-ton-wish*. I was told repeatedly and seriously that every prairie-dog's hole contains both an owl and a rattle-snake, in addition to its lawful tenant. I took the liberty of laughing at this story, and was declared to be unnecessarily sceptical. Well, my credulity goes as far as the owl, whose solemnity of character is perhaps a set-off to the liveliness of the "dog," but I must draw the line at the rattle-snake. The whole story is probably founded on a few isolated cases in which owls and snakes have been found in the "dogs' holes, but it is unsafe to generalize on the strength of individual instances. The "dog" and the owl might possibly arrange a *modus vivendi*, but as a permanent lodger the rattle-snake is surely out of the question. If, indeed, that awful creature is often an uninvited member of *Wish-ton-wish's* family circle, all I can say is that the merry, harmless little "dog" labours under a serious grievance.

I kept a sharp look-out for prairie dogs, but, though I passed over thousands of miles of prairie, I was fortunate enough to see only one solitary member of the family. He was sitting up close to his hole, as already described, but he took a header into his burrow at the moment I came abreast of him. Possibly, he was the "town" sentinel, which had been left above ground with orders to retire at that particular moment.

The little prairie towns and cities are as like each other as two peas, and very dreary and unlovely the majority of them are, in appearance at least. They are for all the world like a box of toy houses placed pretty much at random on a table by a child. The prairie is as level, and trodden until it is apparently as hard, as the table. There are no trees, and seldom any enclosures in the shape of gardens. The frame houses, painfully alike and alarmingly fragile in appearance, stand out stark and naked on the plain. The prairie is around them; the prairie is between them; the prairie separates them from their own small out-buildings, which stand off at a respectful distance like sentry-boxes. Every square foot of the town site, of course, belongs to somebody; but as the greater part of it is often unenclosed, it is, like an English common, traversed freely in all directions by anybody and everybody. Where there is a station, some sort of an attempt is usually made to form a kind of one-sided street facing towards the railway, and the fronts of the buildings on such a street form a line as straight as the railway itself. But, except on this one street, no sort of order is visible in the arrangement of the buildings. The plan of the town may be, and generally is, as regular and rectangular as a chess-board; and as the town site fills up, its irregular appearance will gradually disappear. The raggedness and irregularity are due, as I have before explained, to the fact that new-comers select "building lots" at random—one at the corner of one block, the next in some other block, and so on. The principal buildings are usually on the straight street parallel with the railway. The hotel is generally the most imposing edifice. It may possibly be of brick, and two or three stores and warehouses in the same line may be equally substantial. But such buildings (usually exceptions) are separated from each other by frame-houses and shanties of all sorts and sizes, and in all stages of ugliness and decay. Some are as gorgeous and dazzling as a new coat of white paint can make them. Others have never been treated to a particle of colour through all their brief history. These are weather-stained, falling into premature decay, and dismal to contemplate. How they manage to hold together and resist the winds which sweep unchecked across the vast plains is a mystery. That would be a very "one-horse" tornado which failed to scatter a whole city-full of such buildings as straw is scattered by an ordinary breeze. Viewed from a distance and from a point immediately in front of it, a prairie-city frame store or house has often a rather pretentious look, especially when it is new or newly-painted. But the spectator must not view it in profile, much less walk round it. If he does, he must blame nobody but himself if he is painfully disillusioned. His verdict will probably be: "Whited sepulchre!" For the building which he perhaps took for a lofty, parapeted house is found to owe three-fourths of its apparent importance to the wide, lofty, wooden screen behind which the real house—an insignificant, gabled, flimsy concern—is cunningly concealed. The building bears, in fact, about the same relation to the front that the flimsy canvas "show" of an English fair bears to the great expanse of gorgeous painting behind which it hides. The square wooden screen, however, serves one useful purpose. It is a famous sign-board, and the owner usually paints "Grocery," or "Meat Market," or "Dry Goods," according to the nature of his trade, in black letters, three or four feet high, along close to the very top of what

looks like the parapet. The country being almost perfectly level, the town or city is visible from a distance of many miles, and the tradesman thus advertises his business without expense over an immense area. His "sign" may possibly be read by means of a field-glass ten or twenty miles off.

PRAIRIE CHURCHES.

"There is no God west of the Missouri!" This saying used to be very common throughout the States. The proverb was due to the notorious lawlessness, selfish greed, and unrestrained violence of thousands of those who were attracted to the Far West by the wonderful discoveries of gold and silver, thirty or forty years ago. Such a population had neither time nor inclination to think about anything but their mad race after wealth. But this saying now demands reconsideration—that is, if the recognition of a Deity is held to be proved by the existence of churches. There are few communities, however small, without at least one church; and by the time a town has secured 1,000 inhabitants, it often possesses two or three places of worship, connected with as many different denominations. The church usually stands back at some distance from the main street. It is very often the sole occupant of a whole "block" of land, and very solitary and forlorn it looks. It is generally of wood, tiny spire and all, and the similarity which exists between these earliest efforts at church-building is very remarkable. There must be thousands of such buildings in the rural districts, which are as much alike as if they had all been turned out of the same mould. The toy church which usually accompanies the houses of a child's toy town appears to have supplied inspiration to the architect who designed the first of them. Dingy and decaying as many of the stores and houses may be, the church, it must be admitted, is usually as "spick and span" as incessant painting can make it. It is usually painted a staring white from weathercock to basement, and the effect on a bright day is perfectly dazzling. Sometimes, I noticed, the white is relieved or "picked out" with blue or green lines at all the angles. This is certainly an improvement, though the effect is sometimes startlingly showy. Altogether, a country church in the West is about as unlike an English parish church as the prairie on which it stands is unlike Devonshire or Cumberland.

RAILROAD ENGINE SHOPS.

The longest of our English railways are able to concentrate their locomotive works in one or two places, but this cannot be conveniently done in the case of such a concern as the Union Pacific, whose main line alone is 1,000 miles long. If an engine breaks down or is wrecked in a collision, it does not do to send it 500 or 600 miles for repairs. The Union Pacific Company accordingly had to provide engine sheds and repairing shops at several points on their line. This means that they had to create new towns in the wilderness, and to induce hundreds of skilled mechanics to go out and inhabit them. At two or three points between Omaha and Denver, I passed establishments of this kind. They were hardly up to the level of Crewe and Swindon; but, considering the circumstances under which they had sprung up, they were equally remarkable in their way. There is at each such place a large engine stable, in the shape either of a "round-house" or of a building in the form of a segment of a circle, with numerous lines running into it, like

the ribs of an open fan, from a large central turn-table. Speaking of turn-tables reminds me of a very simple substitute for that ponderous and costly apparatus, which I saw at many of the prairie stations. This substitute consisted simply of an arrangement of rails like the letter Y united by "points" to the main line at each end of the fork of the letter, thus:—

A There is, of course, a switch at each angle of the triangle. An engine which it is necessary to turn round runs from the main line up one fork of the Y and backs down the other. When it reaches the main line again, it is obvious that its head is facing in the opposite direction to that in which it faced before.

These miniature Swindons are not merely repairing stations. They are the points at which the engines, engineers (drivers), firemen, and conductors relieve each other—a process which, on a straight run of 1,000 miles, is of course repeated several times. The necessity of creating numerous establishments of this kind in the wilderness was not the least of the many obstacles which lay in the way of the projectors of the Pacific Railroads. But this difficulty, in common with every other, has been triumphantly surmounted, and there is now no part of the line so far from a repairing shop as some parts of our own Great Western Railway are from Swindon.

THE WICKEDEST PLACE IN AMERICA.

The branch for Denver leaves the main line of the Union Pacific at a place which is now called Denver Junction, but which was formerly known as Julesburg. The Company probably had more than one reason for changing the name of this station. It was only natural that, when the branch to Denver was opened, the place should be called Denver Junction; but there was another very good reason for the change. The name of Julesburg stank in the nostrils of all timid travellers. In its early days, it was a perfect sink of iniquity, and the violence and general lawlessness of its inhabitants earned for it the title of "The Wickedest City in America." Murders were so frequent that it was a subject of remark when a morning dawned on which there was not "a man for breakfast"—that being the pleasant and delicate way of stating that somebody had been done to death during the night. Nevertheless, it was, perhaps, a little invidious and unfair to call Julesburg "The Wickedest City in America;" for, if the truth must be told, almost every western city has been the "wickedest place" in its turn. It has been the rule, rather than the exception, for such cities to pass through a period of lawlessness. The places often owed their existence to discoveries of gold or silver, or to some other circumstance which attracted reckless, rowdy, avaricious men of the gambler type from all parts of the world. The population, made up mainly of these elements, grew with great rapidity; it outgrew, in fact, the inadequate provision made by the State or Federal Government for the execution of the law. For a time, society was in a state of chaos. The period was one

"When those might take who had the power,
And those might keep who could."

Every man was a law unto himself, enforcing his own rights, and acting, when necessity arose, as judge, jury, and executioner in his own cause. Quarrels were fought out with pistols and knives; insults, real or imaginary, were avenged in blood; and in some cases it was an exceptional phenomenon for a man to die otherwise than "in his boots." Such was often the first stage of

a city's existence; and to this stage of utter lawlessness succeeded, with the most unerring certainty, the period of Lynch Law. The decent and peaceable citizens, driven at last to take action, met in secret and organised the suppression of the rowdies. Murder was immediately avenged by the stringing-up of the murderer at midnight by a band of masked men. The worst of the ruffians received a few hours' notice to "clear out," with an intimation that they would be hanged if they failed to go. And hanged they were, if they disobeyed the summons. This drastic treatment was generally successful. By the time half-a-dozen criminals had been hanged and a score or two banished, the state of things had utterly changed. A place which had been regarded and shunned as a hell upon earth was thus converted within a few short months, and by the action of a few determined men, into a decent, law-abiding town, where life and property were as safe as in any Eastern city.

The rowdy, lawless stage at Julesburg was, I fancy, more protracted than usual. At any rate, the place bore its evil reputation for a number of years after the opening of the Pacific Railway. It was near here that the Pacific trains were repeatedly boarded and robbed. This happened once as late as 1879, and I am not sure that that was the last time. I may add that such attacks on trains are not entirely unknown even now. A desperate attempt was made on a train on the Atchison, Topeka, and Santa Fé line while I was in the country, and such attacks will be certain to occur at intervals on all lines passing through unsettled districts, where the "powers that be" have as yet organised no effective means of enforcing the law. The robbery of trains has, in fact, been reduced to a fine art. The thing is done somewhat in this fashion:—

A gang of disguised ruffians, each carrying a little arsenal of concealed weapons, board the train at night by twos and threes at different stations, distributing themselves on a pre-arranged plan among the different cars. The train having reached some wild spot in the middle of a long run, a couple of the ruffians saunter forward to the baggage cars, shoot or overcome the baggage man, and then go on to the engine, compelling the driver and stoker, on pain of instant death, to stop the train. The moment the train slackens, operations are commenced in the cars. A fellow takes his stand at each car door, points two revolvers along the car so as to cover every person in it, and cries "Hands up." Many of the passengers may be armed, but at this sudden challenge they are perfectly helpless, whether armed or not. They know that the slightest movement of their hands towards their weapons would be rewarded with a bullet, and all accordingly hold up their hands. And there they have to keep them, on pain of instant death, while the confederates of the ruffians at the doors go leisurely through the car and "take up a collection"—i.e., take all the money, watches, and other valuables which the passengers happen to have about them. The work being effectually done, the scoundrels jump off the train (now at a standstill) and disappear in the darkness. Sometimes, when the baggage cars are known to contain Government or other treasure, the attack is confined to them, and desperate encounters have before now taken place between the thieves and the baggage agents, who are always armed. Sometimes the desperadoes are badly handled, and not only fail in their object, but incur a rather heavy "butcher's bill." At least two attempts of this kind were repelled last year.

The cry of "Hands up!" is not an exclusively railway challenge. It is the universal cry of highwaymen in the States. The habit of carrying concealed weapons is so common out West that the attacking party knows he dare not let his victim make the slightest movement in the direction of his pocket. He is perfectly aware that, if he does allow this, his antagonist will be on equal terms with him in about a second, and may possibly fire first. He, therefore, insists on the arms being held up at full length while his mate secures the "swag." This cry of "Hands up" has added a new verb to the American language. To "hold up" a coach is to rob the passengers in the approved fashion already described. A stage coach-full of "Knights Templars" were thus robbed on their way to the Yosemite Valley while I was in the neighbourhood, and the newspapers reported the outrage under the heading, "Another Stage Held Up!"

We passed Julesburg some time during the night, while we were asleep, or trying to sleep, in the Pullman car. We were not "held up," and I am, therefore, unable to describe how a man feels when he is undergoing that process.

BUFFALO GRASS.

When day dawned, we were approaching Denver, and the mighty barrier of the Rocky Mountains, extending north and south as far as the eye could reach, lay on our right. The brown, bare, arid plain was all round us, stretching away illimitably in every direction except that of the mountains. To the stranger these western prairies look, in the autumn, like deserts, utterly valueless for agricultural purposes. But their appearance is misleading. The short, brown, dried up, bunchy herbage which carpets the country for hundreds of miles is the famous buffalo grass. It is only two or three inches in height, and its seed is produced from flowers almost covered by leaves and close to the ground. It grows in small, dense tufts, and is exceedingly rich and sweet. In the spring, it is green; but as the season advances it dries on its stem, retaining all its sweetness and looking precisely like hay. Without any exception, horses, mules, and stock of all descriptions refuse all other kinds of fodder while buffalo grass is within their reach. This grass was the natural food of the buffalo when he had these vast plains to himself; but now that he has retired to more secluded districts, the grass shows some signs of giving place to other kinds of herbage.

COLORADO AND DENVER.

Denver, the political and commercial capital of the State of Colorado, is the largest and most prosperous city in the long stretch of 1,900 miles between the Missouri River and San Francisco. I have already told so often the story of the fabulous growth in population and wealth which constitutes the history of so many Western cities, that the task is becoming a little monotonous. It is, however, necessary to tell it over again in connection with Denver, unless I am content to convey a very imperfect impression of that remarkable city. And that I do not want to do.

Denver stands about fifteen miles from the foothills of the Rocky Mountains, at the junction of a stream called Cherry Creek with the southern arm of the Platte. It is, in fact, on the extreme western edge of the great plains. With the mighty barrier of the Rockies at its back, it looks eastward across a thousand miles of prairie. The situation is in all respects a

grand one. It is just far enough from the mountains to allow the main chain—the great Continental Divide—to be seen to advantage above the smaller ridges or foot-hills which form, as it were, the outer ripples of the central sea of solid billows. All who are familiar with mountain scenery will understand my meaning. The highest mountains are not always, or indeed frequently, best seen at close quarters; for they seldom rise sheer out of the plain. Between them and the plain are usually interposed several inferior ranges, by which the central and superior chain is gradually approached, as by a series of steps. In order to obtain a view of the central mass, it is necessary either to ascend the outlying heights, or to retire backward into the plain until the former can be seen towering above the latter. Denver, accordingly, is just far enough from the mountains to get a good view of them, and those who have seen the main chain of the Bernese Alps from the heights above Berne are in a position to understand what that view is like.

Whether the Denver landscape is as fine as that at Berne depends a good deal upon the conditions under which it is seen. There is not much difference between the heights of the principal peaks of the Colorado Rockies and those of the Bernese Alps. In each case, 14,000 feet is about the extreme limit. But whereas Berne is only 1,760 feet above sea-level, the spectator at Denver stands at an elevation of more than 5,200 feet, and the mountains are, of course, dwarfed in proportion. I think, too, that the Alps have the advantage both in ruggedness of outline and in their larger supplies of snow. The summer snow-line in Switzerland is only 8,000 or 9,000 feet above sea-level, but in the Rocky Mountains the snow often disappears entirely, except from the very highest peaks, towards the end of the summer. There was very little snow to be seen when I was among them. I crossed the main ridge in a railway train at the amazing height of nearly 11,000 feet; and even at the summit of that remarkable pass there was plenty of rather stunted timber, but not a particle of snow. The truth is, the atmosphere of Colorado, and of the whole western region of America almost down to the Pacific sea-board, is wonderfully dry. Of the practical advantages and disadvantages of this aridity I shall have occasion to speak presently. Its effects on the mountains are obvious. The fall of moisture, whether in the form of rain or of snow, is a mere fraction of what it is in the Alps; and, further, the little that does fall is quickly caught up again by evaporation. Miss Bird tells us in her famous book on "A Lady's Life in the Rocky Mountains" that the snow does not wait to melt before disappearing. It is, she says, re-absorbed as it lies into the atmosphere by some invisible process which has not yet been fully explained. The consequence is that the Rockies of Colorado are not a snowy range to anything like the extent that their height and latitude would lead one to expect. Tastes, no doubt, differ in this respect; but I am free to confess that I like my mountains white—as regards the last two or three thousand feet of them, at any rate. The glistening snow-fields and glaciers of the Alps constitute the finest possible contrast to the successive belts of pasture and forest which engirdle the lower zones of the mountains. This contrast is almost entirely wanting in the Rocky Mountains in the early autumn, if I am right in generalizing from what I saw and what I failed to see while among them.

It must, nevertheless, be admitted that the view of the mountains from the neighbourhood of Denver on a fine day is a never-to-be-forgotten experience. The wonderful clearness of the atmosphere of Colorado enables the spectator to take in such a stretch of the chain at a single glance as, so far as I know, can nowhere be equalled in the Alps. No less than 300 miles of the range can sometimes be seen at once, Long's Peak being visible on the right and the Spanish Peaks on the left. There is, moreover, one other feature of the Rocky Mountains which is not to be found in the Alps. I refer to those narrow, profound, and awful gorges called canons (pronounced "canyons") which have so often been described by travellers, and of which, as the engineers have had the audacity to push railways through some of the most famous of them, I shall be able to give a little information in due course.

As I before remarked, Denver is about 15 miles from the foot-hills. The intervening country is almost perfectly level; and so deceiving are the distances in that clear atmosphere and in the presence of the giant range, that it is not easy to make a stranger believe that he could not cross the plain on foot in about an hour. It is said, indeed, that persons have been known, on their first visit to the city, to set out on an ante-breakfast walk to the hills and back.

The dryness of the atmosphere of Colorado renders the State a most eligible residence for all persons suffering from diseases of the lungs. It has, indeed, come to be regarded as a great sanitarium, to which medical men send consumptive patients from all parts of the country. The State contains numerous health resorts, where, in addition to the fine, dry air, patients can obtain mineral waters of all degrees of nastiness, and, I dare say, of medicinal value. Its atmosphere is, however, Colorado's most famous and most genuine physic. People who can breathe no other air breathe that and thrive on it. I met, on my return voyage, with a gentleman who told me he had a consumptive brother near Denver who positively could not live anywhere else but in Colorado; and, if I am rightly informed, his case is only one of hundreds, if not of thousands.

Denver owes its existence to the enormous mineral wealth which has of late years been brought to light in the neighbouring mountains. Its exact position was determined by the discovery of gold in the sands of Cherry Creek. It was founded as long ago as 1859, but its growth and development have really occupied only a small part of the quarter-century which has since elapsed. It grew fast for the first two or three years, but it then suffered a long and serious check through the breaking out of the great civil war, and afterwards through the discovery of still richer mineral deposits further West. In 1870, the city was connected with the Eastern States by the opening of two railways—first, a branch to the main line of the Union Pacific at Cheyenne, 106 miles distant; secondly, the Kansas Pacific Railroad, running direct from Denver to Kansas City, a distance of 639 miles. The opening of these two lines caused a kind of "spurt," or, as the Americans call it, a "boom," and for another two or three years the city appeared to be on the high road to greatness. But in 1873 a series of disasters set in, which again checked its progress. First, came a great commercial and financial panic; and this was followed by two seasons in which the whole State was ravaged by grasshoppers. It was, therefore, not until about 1878 that the wonderful tide of prosperity which is now flowing fairly set in. That year was

marked by the discovery, at Leadville and other places in the State, of mineral deposits on a scale hitherto undreamt of. A great rush was at once made for these rich districts, and Denver, as the commercial and financial centre of the State, began to profit enormously. The mining "camps" were mostly mere collections of rude, hastily-built shanties, in well-nigh inaccessible spots among the mountains, and their society was of the usual rough and lawless type. Denver, therefore, became the head-quarters of many of the mining speculators. From it they drew their supplies of necessities, and there they placed their families even when they were not free to reside there permanently themselves. To Denver, moreover, much of the ore from the mines is sent to be smelted. But the city is rapidly becoming something more than the mere capital of the Colorado mining district. Agriculture is extending, and cattle-rearing is being carried on in Colorado and the neighbouring Territory of Wyoming on an enormous and ever-increasing scale. Denver is the chosen residence and head-quarters of many of the owners of cattle ranches, and these add very appreciably to its population and prosperity. Almost every trade has now obtained a footing in the city, and it is becoming a centre of distribution over a very large area. It is too much to expect that it will ever become a second Chicago; but that it is destined to be the commercial capital of a district comprising many thousands of square miles is a foregone conclusion among all who understand the geography, the circumstances, and the history of Colorado and the neighbouring States and Territories.

I have no information as to the population of Denver prior to the census of 1880. It was in that year barely 36,000; but the annual report of the Denver Chamber of Commerce, now before me, claims (to adopt an American expression) that the population had increased to 75,000 by the beginning of 1884. If these figures are correct, it has more than doubled itself in less than four years. Supposing this wonderful growth to be maintained, six figures will be required to express the facts in about a couple of years.

Denver is already a railroad centre of the first class. It has connection with the main line of the Union Pacific by three routes—viz., two by Cheyenne (pronounced "Shienne") and one, as already explained, by Denver Junction (Julesburg). The Kansas section of the Union Pacific runs direct from Denver to Kansas City, at an average distance of about 200 miles south of the main line to Omaha. But between the two parallel lines of the Union Pacific runs the independent line of the Burlington and Missouri River Railroad. Still further south is another great East-and-West route—the Atchison, Topeka, and Santa Fé. This line does not actually touch Denver, but its trains run into the city from Pueblo over the rails of the Denver and Rio Grande. A passenger from Denver to the Eastern States has, therefore, a choice of no less than four routes. The Denver and New Orleans Railroad is another great undertaking. It is, I believe, still unfinished, but its object is to connect Denver by a direct route, *via* Pueblo, with the Gulf of Mexico. The four long Eastern lines are apparently the most important of the roads which centre in Denver; but they are certainly not more essential to the prosperity of the place than the shorter narrow-gauge lines which connect the capital with all the great mining centres up among the mountains. To the tourist, the lover of nature, and the student of engineering, these mountain lines constitute,

beyond all question, the most interesting and wonderful group of railways in the world. They are so wonderful, and so utterly unlike anything to be seen in Europe, that I shall make no apology for giving, in a future chapter, a somewhat detailed account of what I saw of them in a series of journeys extending over nearly 1,800 miles.

Considering the very rapid growth of Denver, the city is wonderfully complete in all that constitutes an agreeable place of residence. That it has gas-works, tramways, and water-works goes without saying; but in so new and busy a place it is surprising to discover that the inhabitants have already found time to supply themselves with the electric light, with a system of steam-heating, with a splendid system of public schools, with a university, churches, hotels, an opera-house, and other public buildings, all on a scale of splendour which is scarcely surpassed by the oldest and largest of Eastern cities. The energy, faith, and enthusiasm of the inhabitants are such as a stolid Briton finds it hard to understand. The invigorating atmosphere of a site which is elevated a full mile above sea-level, the magnificent and ever-present prospect of the great mountain chain, the skill and enterprise with which engineers and capitalists have succeeded in linking together with iron bands the capital and the apparently inaccessible mining towns, the almost miraculous growth of population and wealth due to the wonderful discoveries of the precious metals—these and similar causes appear to have fairly intoxicated the Denverites. They are drunk with mountain air and phenomenal prosperity. Their enthusiasm for their city and their State knows no bounds. What the Promised Land was to the wandering Hebrews, what Salt Lake City is to-day to the imaginations of thousands of European Mormons, that Colorado and its prosperous capital are to the inhabitants thereof. It is part of their creed that the beauty of Denver is matchless, and that the development and prosperity of the State can know no limits. If unbounded enthusiasm, and an unshakable faith in themselves and the grand country which they have made their own, are of any avail, the people of Colorado are doing much to bring about the fulfilment of their own glowing prophecies.

There is, however, an amusing side to this rampant enthusiasm. It is, in fact, apt to run into bathos. I met, for instance, with a copy of one of the Denver newspapers, which contained an article on the completion of the Rio Grande Railroad extension to Salt Lake City. That article was simply an hysterical screech from beginning to end. The poor man who had written it had been carried away by his inspiring theme. He was fairly intoxicated with the splendid prospects which the opening up of this new route appeared to promise. I showed this screech to a sober and matter-of-fact Eastern journalist. He read it through, and handed back the newspaper to me with this quiet but significant remark: "Whisky!" I am more charitable myself, however, with regard to the source of the Denver editor's inspiration. His somewhat incoherent rhapsody was, after all, only the expression, in an exaggerated falsetto, of the aspirations, the enthusiasm, and the unbounded faith of his fellow-citizens.

The Board of Trade report to which I have already referred thus sums up the present commercial position of Denver:—

"Denver has grown to a point where she is beyond competition within the field of her aspirations. Her supremacy is assured. She has risen in the past few years to the position of the undisputed metropolis, not of Colorado

alone, but of the entire arid region. From the Missouri River to the Pacific Ocean, and from the British to the Mexican line, she is without a peer. She is not merely the commercial centre of this vast and rich country. She is also its financial and social capital. The copper-mine owner of Arizona, the large ranchman of New Mexico, the possessor of the great herd of cattle in Western Kansas, the man with the gold-smelter in Montana, the large sheep-owner of Idaho, as well as the investor in silver mines in Utah, all exhibit a tendency to make the city a dwelling-place for their families and the financial headquarters for their vast enterprises. When the railroads so adjust their rates as to recognize the importance to which we have grown, we shall be the distributing point for all the interests owned here. No industry that immediately feeds Denver is in a bad way. Silver and gold mining indisputably employ more men in actual production than ever before. Agriculture is expanding all over the State, and is assuming immense proportions. Sheep-grazing is growing faster than most people are aware. Cattle-raising is enjoying a veritable boom. Manufacturing is attracting universal attention. Capital is flowing in and seeking meritorious investments. The tide of immigration keeps up. Land is advancing rapidly in value, and city property remains wonderfully firm. The banks are strong, and our leading commercial houses are remarkably solid."

Denver, as I have before said, stands on the plain; but the plain at this point is slightly undulating. The site of the city is on a gentle slope, just sufficient for drainage and irrigation purposes, as well as to break the monotony inseparable from a dead level. The streets are laid out in the usual rectangular fashion, and in one direction are numbered from First Street upwards. Those which run at right angles to the numbered streets are named on no apparent system; that is, on the English plan, or absence of plan. The business parts of the city are still disfigured here and there by a few dilapidated shanties, of the kind of which the place no doubt exclusively consisted in the earlier stages of its history; but by far the larger proportion of the warehouses, stores, and offices in the principal streets are solid erections of the most substantial kinds. Some of the "blocks" of business buildings may be fairly described as gigantic as to size, and splendid and costly as to architecture.

The residential streets, stretching far out in almost every direction into the suburbs, are particularly attractive. The roads are wide, and the avenues of shade trees are very beautiful. Many of the residences bear eloquent testimony to the wealth and taste of their occupants. As to their wealth, there can be no question whatever. They already constitute one of the richest communities in the States. The residential suburbs will be still more attractive when they are finished. Their chief disfigurement at present consists of numerous vacant scrubby "building lots" which are probably being held by their owners until purchasers can be found for them at fancy prices. Meantime, they constitute a sort of No-man's-land, or, perhaps it would be more correct to say, Everybody's-land; for everybody traverses them freely without let or hindrance whenever a corner can thus be cut off, and the children, of course, find them particularly useful as playgrounds.

Almost every street has a stream of clear water running along the gutter on each side, just as the streets of Wells, Chard, Tiverton, and some other towns in the West of England have. In addition to the other advantages of such a system of irrigation, there can be little doubt that, in the case of Denver, where there is little or no rain for several months at a stretch, the water is absolutely essential to the maintenance of the fine avenues of trees beneath which

it flows. The exceptional luxuriance and verdure of these trees are, no doubt, largely due to this perennial watering.

Denver is remarkably fortunate in the character of the soil on which it is built. This is a sandy loam which, once put into shape as a road, becomes almost as firm and hard as a macadamized road. I am not quite sure whether the principal thoroughfares are ever repaired with stone, but it is a fact that the suburban roads require simply to be kept in shape. They are soon dry after rain, and there is little dust on them after a drought. They are firm enough to resist the pressure of both hoof and wheel, and yet so elastic as to be well-nigh perfect for riding and driving. It is, I know, at the risk of exciting envy in the breasts of English Highway Boards and ratepayers that I say all this; but it is all true, and the risk must be run. After all, we must resign ourselves to the undoubted fact that the human race cannot all live where the hills are full of gold and silver, and where Nature has even made arrangements for keeping the roads in repair at her own expense.

The public buildings of Denver are on a scale commensurate with the wealth and public spirit of the inhabitants. Being both the county seat of Arapahoe County and the capital of the State of Colorado, it necessarily contains the buildings devoted to the State and county business. The permanent State Capitol has not yet been built, but it is intended to place it on a commanding site already called Capitol Hill, and it is certain to be worthy of both the city and the State. The County Court House and the City Hall are fine buildings, but the pride and boast of the city now is the newly-erected Opera House. I suppose, however, I must give this place its full name. It is called the Tabor Opera House, having been built at the sole cost of a Mr. Tabor, who is a very wealthy citizen, and of whom I do not care to say much more, although I heard a good deal about him. He is said to have spent 800,000 dollars on the entire block of building, which contains the Post Office as well as the Opera House. The latter is declared by actors who have appeared in all the principal theatres in the world to be second in splendour to the Grand Opera at Paris alone. A twenty-five-year-old city may well pride itself upon such a verdict as that. Large as the cost was, Mr. Tabor is understood to receive a satisfactory return on his outlay. The Americans are a theatre-loving people, and in rich cities like Denver they willingly pay extravagant prices for the privilege of seeing and hearing the most famous artists. There are few places, however small, without their "opera houses." Even the little prairie cities which I recently described often have such a building, though it is seldom anything more than a flimsy shanty, with the usual square, showy front. I may, perhaps, as well remark here that the general attitude of the religious bodies of America towards the theatre is very different from that maintained by most of the English churches. It is an exceptional thing to hear the theatre commended, or even spoken of in a tone of toleration, by religious people on this side the ocean; but in the States the exceptions (and, of course, there are numerous exceptions) are on the other side. The preacher who filled Mr. Beecher's pulpit at Brooklyn on the Sunday I was there expressly mentioned refined stage plays as among the legitimate agencies for developing the intellectual and moral nature. In Utah, the theatre may be almost regarded as a branch of the Mormon Church. Brigham Young was largely "in-

terested" in the Opera House in Salt Lake City. It was a common thing in his time (and I am not aware that the plan has been abandoned) for one of his officials to announce the theatrical performances for the coming week after the Sunday service at the Tabernacle. And the love of theatricals is not confined to the capital of the Territory. I saw "opera houses" of the shanty genus standing alongside the temples in more than one little Mormon city that I passed through. Opponents of the theatre will probably say that the opinion of "those wicked polygamists" does not count. There is some force in that, no doubt, and I am bound to say the drama would be in a bad way if it depended solely on Mormon recommendation. But I am not now arguing the matter. I have my own decided opinion, of course, but my object at present is simply to state facts.

Denver already possesses a number of very fine hotels. They are not yet up to the level of those of New York, Chicago, and San Francisco as regards size and splendour; but, considering the youth of the city, they are not the least remarkable of its institutions. They are largely patronised, too, for no less than five hundred strangers enter the city daily. I had no opportunity of making myself personally acquainted with either of the hotels, for I and my friend were, on our arrival, taken captive with the bow and the spear ("figger of speech," as Artemus Ward might say), and carried off into the suburbs, to the residence of an old Yeovilian, once a member of the staff of the *Western Gazette*, and now the proprietor of a prosperous printing establishment in Denver. He would not hear of our going to a hotel; and, being helpless in the matter, we resigned ourselves to our not unpleasant fate, and spent the greater part of a week under his hospitable roof. We are deeply indebted to him and his family, not only for the pains they took to entertain us, but for the aid they afforded us in making the most of the few days we were able to devote to Colorado.

The new Union Depot (railway station) is one of the finest and most convenient I saw in America. It is used by all the companies whose lines run into Denver—an arrangement whose convenience will be understood by all who have ever lost time, temper, and trains in running or driving from one terminus to another in any of our large towns. There are so few wet days in Denver that it was not thought necessary to cover the railway platform with a roof. I am afraid the word "platform," by the way, is misleading to a stranger when used in connection with an American railway depot. There is seldom any platform in our sense of the term. At Denver, for instance, you step out of the waiting-room upon a perfectly level wooden floor, an acre or two in extent, cut up in all directions by lines of rails, which are sunk, like tramways in towns, to the general level. To reach the train you are in search of, you may have to cross half-a-dozen of these lines, lugging along with you all your hand baggage, for it is seldom a porter's services are available. Trains are moving about at a crawling pace, and everyone has to look out for himself. The engine bells toll continuously during these movements, and I suppose nobody who is not stone deaf has any right to be surprised to find himself taken off his feet by the cow-catcher of a locomotive. To an Englishman, accustomed to foot-bridges over and subways under the lines, the whole thing looks dangerous enough; but no doubt American travelling humanity adapts itself to the circumstances, and keeps a specially sharp look-out for the erratic movements of the trains.

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The public schools of Denver are maintained on a truly splendid scale. There are at least nineteen of them devoted to elementary education, besides one or two higher-grade schools. There is also a University, and it is worthy of note that the movement which resulted in the foundation of this high-class educational establishment was started in the year 1863, when the city was barely four years old. These new communities in the Far West have their faults—some very serious ones, no doubt; but, so far as Denver is concerned, it cannot be said that it has displayed, at any time, a want of zeal in the cause of education. In this respect, it has well maintained its character throughout. It would probably be safe to say that no community in the whole world possesses, at this moment, a more efficient and liberally-endowed system of elementary education than does this new city at the foot of the Rocky Mountains. The school buildings are on a scale of magnitude and grandeur which amazed me. I inspected one of them pretty thoroughly, and a greater contrast than it presented to the bare-looking, whitewashed structures in which many of our own children are taught, can hardly be imagined. In the solidity and elegance of the fittings of the various rooms, that structure (the Gilpin School, as it is called) would compare very favourably with the dining-room of the average English gentleman. In many parts of the States, the abundance and variety of the native timber give the builders an immense advantage over us, and the result is that massive wainscotings, mouldings, and other fittings abound where we should have to rest content with bare walls. But the neighbourhood of Denver is entirely bare of wood, and such forests as the more distant parts of the States possess, produce little besides pine and spruce timber. All kinds of fine and hard wood have, therefore, to be brought from other States at a heavy cost. This fact, however, has not prevented the school authorities from employing such woods in the finishing and furnishing of their schools as freely as if it grew close at hand; and nothing struck me with more surprise than the lavishness with which they had expended money in this direction. Everything, in short, that money could do has been done to render the schools comfortable and cheerful; and the abundance and perfection of the educational appliances—the teachers' tools, so to speak—are such as would excite the envy of the master of the best-appointed board schools in England. The Denver schools are famous even in a country whose system of public education generally is a legitimate object of pride. It is said, indeed, that the city has largely profited by the fame attained by its schools. Traders and others on the look-out for a suitable home for themselves and families have been known to decide finally in favour of Denver because of its superior educational advantages.

The world is a small place, after all. Here is one more proof of the fact. It turned out that the caretaker, or resident housekeeper (or "janitor," as the Americans call such an officer) at Gilpin School was a native of the English town I hailed from (Yeovil), and that his wife was a Yeovillian too. Both had, in fact, lived within one or two hundred yards of the office of the *Western Gazette*. I have come to the conclusion that there is no place in the whole world in which it is perfectly safe for a man to do a thing he has reason to be ashamed of. Whether you are at Timbuctoo or at the North Pole, there is always the risk that your next-door neighbour may turn up at the very moment when you least desire his company.

THE DENVER CHURCHES.

The churches of Denver number nearly sixty, and many of them are costly and handsome buildings. The Catholics are the most numerous body. After them come the Presbyterians, the Methodists, the Baptists, the Congregationalists, and the Protestant Episcopalians, in the order in which I have named them. No less than seventeen churches were either built or materially enlarged during the year 1883, and at the present moment the value of church property in the city exceeds a million dollars. The finest church in the city, and, I may add, in the State of Colorado, was opened by the Baptists a few weeks before my visit. Its cost, exclusive of internal fittings and furnishing, was 85,000 dollars. The history of the congregation worshipping in this church is highly characteristic of the railroad speed at which things and people go ahead in the West. About nine years ago, the congregation was meeting in an apartment in some secular building which they hired for the purpose. In due time, they built themselves a church, which, though of modest pretensions, was opened with rejoicings and congratulations. But the congregation and its demands grew so rapidly that it had very soon to set about enlarging its borders, and the result was the erection in 1883 of the splendid building to which I before referred. This is actually the third place of worship occupied by it successively within a period of little over eight years. Its church No. 3 is, as I have said, a costly and beautiful place. What its No. 4 will be, who shall say? We may yet see a Baptist St. Peter's or St. Paul's at the foot of the Rockies.

Between 11,000 and 12,000 persons attend the various churches on Sunday evening, and the morning attendance is somewhat larger. If wholesale church-going does imply a recognition of the existence of a Deity, Denver alone appears to supply evidence that it is no longer fair to say: "There is no God west of the Missouri." On the other hand, the cynic may, perhaps, discover new justification for his cynicism when he finds that church-going is so exceedingly fashionable in a community which, in the most literal sense, is "making haste to be rich." And it must be admitted that, if all this church-going implies godliness, the Denverites have at last solved the problem how to make godliness profitable for "the life that now is;" for a more prosperous community is not to be found on the face of the earth.

I am disposed to think, however, that a steady-going theologian of the old orthodox English school would open his eyes somewhat wider than usual if he attended the service at one of these grand churches, for he would see and hear a good deal that would probably shock his most cherished conventional notions. I attended the evening service at the Baptist church already referred to, and I confess that my previous experiences, even in America, hardly prepared me for what I heard. According to our orthodox notions, the sermon is the most important part of the business at church—the *pièce de résistance*, as the French say. This was certainly not the case at that Denver church. I trust I do not libel that great congregation in recording my profound conviction that it went to church that evening, as Cowper said some repaired to church in his day, even in England—

"More for the music, than the doctrine there."

And I cannot find it in my heart to be very hard on the congregation, for the music certainly beat the sermon by very long chalks. I have been unable to bring away with

me any essential part of the sermon across the fifteen months and the five thousand miles that now separate me from the time and the place. All I can remember of it is that the preacher made a pathetic reference to the very recent death, under somewhat melancholy circumstances, of one of the Baptist ministers of Denver. But the tones of the lady soloist who sang a beautiful anthem setting of Mrs. Adams's famous words, "Nearer, my God, to thee!" have not yet ceased to echo in my ears. The solo itself would, I imagine, be regarded as a questionable innovation by an English Baptist of the old school; but what he would be likely to say if he were told that the soloist was a professional from the opera, who received quite a little pile of dollars for her services, my imagination fails to suggest. That, however, was the fact. The congregation, wanting good music, had gone to the best available market and secured a splendid article. In that they did well. I would gladly put myself to considerable expense and trouble to hear that solo again from the same lips. It was an exquisite and touching performance, and the congregation was visibly affected. Those who take exception to it will perhaps ask themselves why they object to allow their aspirations to be sung for them by a trained and paid vocalist, while they employ a paid minister to utter their prayers for them. Ah, me! What mere bundles of conventionalisms and inconsistencies we are, after all!

ELECTRIC LIGHTING.

Speaking in a previous chapter of Minneapolis, I referred to the system, partially adopted in that city, of lighting the streets by means of electric lights mounted on the tops of very high masts. I saw this system in use in one or two other places, notably in some of the open spaces in New York. But nowhere, I believe, has it been adopted on the same scale as at Denver. Six slender iron towers, 150 feet high, have been erected at as many different points in the suburbs, where there is no gas, and on each tower has been placed a group of electric lights, of several thousand candle-power. As the suburban roads are wide and by no means closely built up, this system of lighting proves very effective, each tower illuminating a very considerable area. But it is obvious that the system, however effective in an open suburban district, would be of little use in the midst of a crowded city of narrow streets and tall houses.

STREET CARS.

Denver, in common with all other American cities, has a system of tramways, extending through all the principal streets, and running far out into the suburbs. The cars are of the "bobtailed" kind already described, and the uniform fare is, as usual, five cents. Travelling in the street cars is about the only cheap thing to be had in the place. With the price of that nobody can complain. It was what the Street Railway Company failed to do that there was serious reason to grumble about a year ago. You could travel to or from almost every part of the city by street car except the one place where you were most likely to want its services—viz., the Railroad Depot. The cars would carry you to within two or three hundred yards of the ticket-office door and there set you down. They could take you no further, for the rails extended no further. The consequence was that, if you happened to have any hand baggage with you, you had either to lug it to the station yourself, or hire a cab at a preposterous charge to finish the journey. Coming from the trains, the same difficulty presented itself, and passengers were

constantly compelled to hire specially, when, if the tram-cars had run to the station door, the heavy expense of so doing might have been avoided. The truth is, the same set of people were interested both in the tram-cars and in the cabs, and the whole object of this absurd arrangement was to compel travellers to hire the latter. The citizens were apparently powerless in the matter, and had no alternative but to submit to the exactions of the monopolists with such grace as they could command. I speak of this grievance in the past tense, because I believe it has come to an end since I was there. I was told, when returning through Denver from California in the following month, that the street railways had been bought by a party of Eastern capitalists, who had no interest in the cabs or "hacks" that ply for hire in the streets, and that the rails were at once to be extended to the doors of the Railway Depot.

THE "EXPRESS" EXTORTIONERS.

I have, perhaps, dealt with this matter at greater length than its importance demands; but I have done so because it supplies an apt illustration of the extent to which the American public allow themselves to be victimized by monopolists. Those who fancy that this country possesses a monopoly in monopolies are very wide of the mark. The particular kinds of monopolies which are most decried in England have, it is true, no counterparts in the States; but if Giant Monopoly cannot entrench himself in one stronghold, he flies to another. One of his favourite fortresses in America is the business of transportation. And it is not always in the case of the railways that the traveller finds his exactions the heaviest and most shameless. The telegraph monopoly is far more galling than any railway monopoly; for, as a matter of fact, there are competing railway lines—sometimes three or four—between all the great centres of trade and population. But the most annoying of all the monopolies to which the traveller is compelled to pay blackmail are the express companies. These are simply great carrying concerns, which have somehow or other managed to secure the exclusive right to fleece travellers in their particular localities. I have already described the convenient arrangement by which the traveller's baggage is "checked" for any hotel as the train approaches a large town, but I do not think I have mentioned the heavy cost at which this service is secured. The process is somewhat as follows:—

As the train nears a city, an agent of the particular express company which possesses the monopoly thereabout passes through the train with a bundle of numbered brass checks strung upon leather straps hanging from his arm.

"Any baggage to check?" he asks in turn of each passenger. Having decided on your hotel beforehand, you reply—

"Yes. I have a trunk and a valise for (say) the Windsor Hotel." At the same time, you hand him the two railroad checks which represent those pieces of baggage, and he gives you in return two of his own checks. He may possibly ask next—

"Is it a portmanteau or a valise you have?"

"Why do you ask that?" you inquire.

"Oh!" he says, "because, if it is a portmanteau, the charge is half-a-dollar; if a valise, the charge is only a quarter-dollar."

Perhaps the distinction is one which has never before occurred to you, and you reply that you know no

difference. The express man enlightens you. A portmanteau is a large leather case with handles at both ends; a valise is a smaller species of leather case, with one handle so placed as to necessitate its being lifted by one hand. The number and position of the handles decide the question of species. You joyfully remember that your piece of baggage has only one handle, and the agent courteously classifies it as a valise and holds out his hand for a dollar; viz., trunk, half-dollar; valise, quarter-dollar—self (fare to hotel in 'bus), quarter-dollar. (I put the fare at the lowest point. It may be a half-dollar, or even three-quarters of a dollar, for I met with both.) But perhaps you have looked out the position of the Windsor Hotel on a map, and discovered that it is only a short walk from the dépôt. In that case, you innocently offer three-quarters of a dollar, remarking—

"I don't want the 'bus. I shall walk to the hotel."

But you are very likely to be told (as I was more than once) that, whether you walk or ride, the charge will be the same. That is to say, the express company will take you and your belongings to the hotel for a dollar; but it will charge precisely the same for your belongings whether you ride or not—which, being interpreted into English, means that the express company, having a monopoly, first of all charge outrageously for a needed service, and then make you take 25 cents' worth of what you do not want.

Is there no remedy? Oh, certainly! There are hacks at the station door, and you can hire one of them to drive you and your baggage to the hotel. But this is, in the most emphatic sense, jumping out of the frying-pan into the fire; for the hack-man will very likely charge you two or three dollars. The probability is that he is a mere agent of the express company, which is, therefore, bound to fleece you in one way or another, unless you abandon all idea of taking your baggage to the hotel. And the mention of this alternative suggests to my mind the only mode of balking the monopolists of their prey. Every traveller, who is moving about rapidly, should have with him a valise or bag which, when filled, he is just capable of carrying a distance of two or three hundred yards. Into this he should put all the clothing and other necessities he is likely to want for a day or two; and if this is the only part of his baggage he wishes to carry to his hotel, he is not at the mercy of the express people. He may decline their offers of aid, and leave his heavy baggage in the baggage room at the dépôt. It will be quite safe there, and he can reclaim it at any time on presenting his check. A small charge for storage is levied on it after the first day; but unless it lies there several days, it is better to pay this than to have it delivered. In nearly every town, street cars which pass the principal hotels are to be found near each station; and the traveller who has nothing but hand baggage can walk to one of these, and so reach his hotel for five cents.

The difference between the tram-car fares and the fares charged by the express companies and hackmen is absurdly great almost everywhere. In one instance (at New York) I walked across a square and entered a car to go to a station. My travelling companion, having a rather heavy bag to carry, had to go in the hotel vehicle from the hotel door. We arrived at the station at the same moment. I had glided smoothly along rails; he had been rattled over the stones in a lumbering and antiquated machine like an old English stage coach. I paid 5 cents for my journey; he paid 75 cents for his. It is simply amazing that so practical a people as the

Americans tolerate anomalies of this kind for a single day.

As my subject has led me far away from Denver, I may as well finish with it for the present with another illustration of the cost of locomotion in New York. We put up there at the Fifth Avenue Hotel, and shortly after our arrival my friend asked a hackman at the door of the hotel what he would drive him to Union Square for. Union Square is about eight or nine blocks, to adopt the American mode of measurement—that is, less than half-a-mile—straight down Broadway. My friend knew the distance; but the hackman apparently took him for a green stranger, for he hesitated a moment and looked skyward, as if engaged in an elaborate calculation as to the distance to some remote part of the city.

"Oh, never mind. I see you don't know," remarked my friend; but Jehu thereupon instantly descended from the clouds with the result of his calculations, which was this:—

"A dollar and a-half!"

"Then I'll walk" was the equally prompt reply; for my friend, though certainly not aliberal, felt bound to draw the line at riding at a cost of \$3d per half-mile.

I was told that this was a fair specimen of the charges of New York hackmen. They are apparently under no control, and the strangers who happen to fall into their hands on the arrival of the Liverpool boats are constantly being fleeced most unmercifully.

In various cities, it cost me three-quarters of a dollar or a dollar to get myself and my baggage to or from my hotel. At Denver, a particularly expensive place, it cost me a dollar and a-half (\$1.50) to get to the station. But this is not regarded as an exorbitant figure in the capital of a State the very dirt of whose roads is sometimes discovered to be rich in the precious metals. Altogether, American methods of "expressing" baggage and conveying passengers through the towns may be confidently recommended as full of more or less pleasing surprises to the Englishman who has all his life been accustomed to pay sixpence or a shilling for the conveyance of himself and his luggage from the railway station to his hotel or his residence. The Americans have considerably "improved" on the sweet simplicity of our old-world arrangements. For my own part, I have a long score of personal grievances against their "express" extortioners; and I feel that I must some day go out again, with all my baggage arrangements made so as to enable me to get even with them, by showing them how entirely I can dispense with their aid. Meantime, I must content myself with showing them up, and advising travellers how to circumvent them.

THE INDIANS.

Denver possesses a permanent Exhibition building on a large scale, in which the industrial products of Colorado and the neighbouring States are exhibited during a portion of each year. The display last year was a large and most interesting one, comprising not a few departments of industry which the stranger would hardly expect to find represented in the perfectly new and, as yet, sparsely-peopled States and Territories of the Far West. I am bound to say that the extent and variety of the exhibition fairly surprised me. As a matter of course, the staple industry of Colorado—mining—contributed the chief element to the display. The collections of ores were amazing both in number and in richness, and could not fail to impress the beholder with the prodigious extent of the mineral wealth of the

Rocky Mountains. There were masses of lead ore which contained something like 90 per cent. of pure metal, and were almost indistinguishable from it both in appearance and in weight. It is difficult to think of a metal which was not similarly represented in the form of ore of proportionate richness. For obvious reasons, gold was not thus exhibited by the ton; but a capital idea of the yield of Colorado gold was conveyed by means of a gilded obelisk, which was said to represent in bulk the actual annual produce of the gold-mines within the State.

One of the most interesting features of the exhibition was a group of Indians in European costume. They had been brought in by a Government agent from one of the neighbouring Indian reservations, and he was responsible for their safe return to their own quarters when they had been exhibited long enough. An Indian in leather boots, a dress coat, and a stove-pipe hat is an irresistibly comic sight. Two or three of the male members (the "bucks") of this party were so attired, and they appeared to be supremely proud of their attire. But a savage is still a savage though dressed in broad-cloth; and in spite of the civilized costume of these men, I fancied I discovered in their countenances an expression of cruelty and treachery which would have effectually prevented me from inviting them to "meet me by moonlight alone." How far this impression of mine was well-founded, or how far it was due to what I had heard of Indian treachery and cruelty, I cannot pretend to say; for, to tell the truth, it is almost impossible to mix for a few hours with Western Americans without becoming infected with their deep-rooted dislike and mistrust of the red men. It is difficult, at this distance, to realise the intensity of these sentiments. The short and easy creed of the Western settler is that "the Injun is pison, wus'n snakes," and entitled to no more consideration than the rattle-snake or the grizzly bear. A resident in Denver told me that he had removed from Philadelphia to that city. As long as he remained in the City of Brotherly Love, where the Indian in his natural state is no longer to be seen, he was disposed to take the sentimental, humanitarian view of the great Indian question; but his opinions and feelings underwent a complete change as soon as he took up his abode in a State where the "noble savage" was still to be seen in abundance in all his original savagery. Blood-curdling stories are told out West of the massacres, by Indians, of unoffending men, women, and children, accompanied by refinements of cruelty perfectly diabolical. These stories, which are usually only too true, beget in the American breast a hatred of the whole Indian race which is indiscriminating and inextinguishable. The Western settler does not greatly trouble himself about nice distinctions. Some Indian tribes are far more savage and cruel than other tribes; but they are all Indians, and as such are regarded as alike on the level with the wild beasts.

This want of discrimination where cruelty has generated a sort of blood feud is unfortunately not peculiar to Western Americans. Some years ago, I got into conversation at Portland with a soldier—apparently a quiet, decent sort of fellow—in one of our Foot Regiments, who had served in India, and who told me with the utmost coolness that he had, at some remote station, quietly "picked off" an inoffensive native with his rifle. On my expostulating with him, he displayed considerable surprise at my indignation, and made this crushing reply: "But see what they did to our poor fellows in

the Mutiny!" Who "they" were was a question he had not asked himself. It was enough for him that certain Sepoys had been guilty of fiendish cruelty to English men and women; and that fact fully justified him in "taking it out" of any one of the two or three hundred millions of dwellers in India whenever the opportunity served.

A feeling akin to this prevails, I am sorry to say, with reference to the Indians in the Western States; and terrible as the Indian massacres have at times been, the retaliation of the settlers has sometimes taken still more horrible shapes. Among the blessings of civilization which Europeans have introduced among the Indians are small-pox and "firewater" (rum). The unsophisticated savage was in his native state a stranger to both, but both have long been among the most active of the various influences which are destroying the last remnants of his race. The story I am about to tell relates to both small-pox and rum, and nobody will think it necessary to doubt it who fully realises the recklessness, the lawlessness, and the unscrupulousness of the early settlers in the mining regions. Some of these settlers steeped in spirits the body of an Indian who had died of small-pox, and then distributed the liquor among the people of his tribe. The result was that they died by scores and hundreds, and the settlers congratulated themselves on having done a good stroke of business, in the way of clearing off the human vermin, without trouble to themselves.

It is easy, as it is proper, to condemn indignantly such hideous atrocities as this. It must, however, be admitted that the Indian difficulty is a very real one, and that it is easier to recognise it than to suggest a solution. The Indians lived by the chase, and the existence of vast forests and prairies was essential to them in their natural condition. But the spread of population westward rendered it necessary, from the settler's point of view, to destroy the forests and to break up the prairies. Here was a clear issue. As the white man advanced, the red man retired fighting, now and then administering a parting blow which thrilled the whole country with horror. But presently he found himself at bay, with the advancing enemy in front, and the Rocky Mountains behind, and it is, therefore, not surprising that the States bordering on the mountains witnessed some of the most desperate of his efforts to maintain his foothold and to turn back the tide of invasion. The American Government did its best to mitigate the effects of the collision between the two races, but human nature was often too strong even for the Government. If a "reservation" was marked off for the Indians, some stray desperado with a white skin soon discovered that it was rich in minerals or some other form of wealth. The "reservation" was forthwith stormed by hosts of desperate men who were a law unto themselves; and if the Indians resisted the invasion, they were promptly shot down. They, in their turn, then crossed their own frontier in the opposite direction, and took their revenge, in their savage way, on any outlying settlers and their families whom they could get at. The whole country was at once on fire, and a state of border warfare was set up which nothing less than a strong force of United States troops could put an end to. Even the little army employed on such a service sometimes fell victims to the cunning and cruelty of the enemy, and race hatred and a desire for revenge were thus stimulated to a most deplorable pitch. "Civilization," of course, prevailed in the long run; the reduced remnant of the tribe was driven together into a smaller

corner, and the boundaries of yet another "reservation" were laid down—to be crossed in due time, whenever it is discovered that the enclosed territory contains anything worth stealing.

The Americans, knowing as accurately as some theologians do the mind of the Deity, lay it down as an axiom that the Author of all things never intended a handfull of dirty savages to monopolize any considerable part of a continent, while their whiter "betters" are in want of elbow-room. Without pledging ones-self fully to the accommodating theology involved in this view of the case, one may, perhaps, admit that there is some force in it. But then there are two ways (perhaps more) of dealing with a feeble and decaying race, which, under any circumstances, seems doomed to die out under the operation of the law which provides for the "survival of the fittest." And after making every allowance for the resentment naturally excited by Indian cruelties, it is, I fear, impossible to contend seriously that Uncle Sam has always handled the difficulty in the wisest and most humane manner. That the Government and the mass of the people have been actuated by good intentions is no doubt true enough; but the daring and lawless pioneers who have marched westward in the van of progress have been too little under control—possibly because, under the circumstances, they were uncontrollable.

The Indians whom I saw at the Denver Exhibition had a tent erected in the grounds attached to the building, so that we had an opportunity of seeing them "at home." The head of the family, having wandered about the building in an aimless fashion for some time, made for his tent and entered. It then became obvious that the chimney-pot hat of civilization did not harmonize with the shape of a tent, and he at once took his head-gear off and placed it carefully out of the way under the lowest part of the canvas. Then he and his womankind simply sat and did nothing. It was not a cheerful family party. Possibly they felt uneasy under the fire of glances which stragglers from the Exhibition building kept up upon them. Whether that was so or not, it is a fact that they sat speechless and motionless. Neither the "buck" nor the "squaws" had anything to do or to say; at any rate, if they had, they neither said the one nor did the other as long as we were within sight and hearing. They looked cowed, dispirited, and listless. They were not badly off, for they were in receipt of a regular pension from the American Government. They had not even to hunt their own food, as they had to do when in a state of nature. Nevertheless, it was clear that they were not happy. I could not help thinking that they were, perhaps, realising, in that great Exhibition, and in the neighbouring city, so full of strange life and restless energy, the sure signs of the fate of their tribe. The masterful palefaces had not only crushed out their independence and appropriated their hunting grounds, but had even converted them into dependents and pensioners. Well might the proud savage sit sullen, sad, and silent in his tent—a tent which was pitched, not amid the boundless forest, where he was monarch of all he surveyed, but in the suburbs of a bustling city, alongside a mammoth show, of which the children of the forest themselves formed an attractive feature. Wonder has sometimes been expressed that some tribes of Indians, even when kindly treated and well provided for, still diminish in numbers and show a tendency to die out utterly. The reason is obvious. As a race, they cannot live in the presence of civilization. Like certain beasts and birds,

they do not multiply, even if they continue to exist, when the freedom of their savage life is restrained. Some of the tribes are rather more amenable than others to civilizing influences, and in a few cases they have been induced to engage in agriculture; but for others there is apparently no hope. They simply wither up in the presence of the strong and aggressive civilization of the European races. Their fate seems a hard one, and it is undoubtedly the duty of the Americans to let them down gently—to see that, as far as possible, their inevitable disappearance is accompanied by as little individual hardship and suffering as may be. More than this is hardly possible, or even desirable. The Indian is disappearing in accordance with what is clearly an inevitable law of nature; and as his disappearance clears the stage for the entrance of a higher type of humanity, his exit is not to be regretted, so long as it is not hastened by injustice and cruelty.

It is usual to speak of the Indian as "the red man," but this description is scarcely accurate. What his colour would be after a good course of "Pears" and a scrubbing-brush, nobody probably knows; but a very dull dirty brown is the nearest description I can offer of the colour of most of the Indians I saw. Their hair is usually jet black (I do not know that I saw a single exception), and it is coarse, straight, and long as that of a horse's unclipped mane. The older women are often bleary-eyed and hideously ugly. They would make their fortunes as "witches" if they lived in certain Somersetshire villages which I could mention—but won't. At various stations on the Pacific Railroad I saw considerable groups of these wretched creatures, standing or squatting on the platforms. Their business there was to beg of the passengers, and, so far as I could see, the railway officials allowed them free trade in this respect. The older and uglier women were most importunate, and in some places the passengers gladly gave them small coins to get rid of the stony gaze of their bleared eyes. Most of these beggars were dressed in the ragged remnants of civilized clothing, and in no respect differed from the poorest class of English cadgers except in their dingy skins and their long black hair. It would be difficult to imagine two things more unlike each other than these wretched survivors of the aborigines, and the "noble savage" of Fenimore Cooper's novels. Whatever poetry and romance there may have been about the Indian when the first European settlers broke in upon his hunting-grounds, it has all departed long since. All that is left of his race (except in a few isolated spots) is a broken-spirited remnant, which is slowly melting away as the sun of European civilization rolls towards the West.

THE "SHOOTISTS."

Denver, like almost every other Western city, had its period of violence, succeeded by its period of Lynch law. The friend who entertained me while I was in the city was not by any means a bloodthirsty person. He was, indeed, more of a turn-the-other-cheek sort of man, and altogether about the last person in the world to convert himself into a walking arsenal except for very sufficient reasons. Nevertheless, he told me that, for a long time after he took up his residence in Denver, he never ventured out of his house without a loaded revolver in his pocket. Being at one time connected with an establishment at which most of the workpeople were on strike, he had reason to believe that he was in imminent danger, and for some weeks he never turned

a street corner without putting his hand on the trigger of his concealed weapon. This was, so far as I can remember, less than 10 years ago, but that lawless state of affairs is entirely a thing of the past. Life is probably as safe in Denver to-day as in any Eastern city, for the law has finally and decisively asserted its authority.

It is just possible that exaggerated ideas may still prevail in some quarters as to the risks run by travellers in some of the newer places in the Far West. My own belief is that judicious travellers run no risk at all. Now and then, it is true, a coach or a train is "held up" and robbed, but it is not in such attacks as these that murderous lawlessness is most manifest. The eternal shootings of which certain Western papers are full take place, for the most part, between drunken gamblers in out-of-the-way mining camps. A traveller who avoids liquor saloons, forswears gambling, carefully keeps out of quarrels, and goes about unarmed, runs but small risk in any part of the country.

"Goes about unarmed?" you say.

Yes, I do; and I say it advisedly. Much of the shooting that takes place is, in a sense, defensive. A and B, half drunk with vile whisky, quarrel over their cards. They are both armed to the teeth, as both are fully aware, and the question is which shall "draw" first. Each watches the other's motions intently, and the slightest movement of A's hand in the direction of the knife or the revolver is interpreted by B to mean mischief. B instantly draws, and stabs or fires, and the newspapers announce next morning that another citizen has "died with his boots on." Perhaps, after all, A had no intention to draw his weapon. His movement may have been misinterpreted. But B, knowing A was armed, could not afford to run any risks, and he "defended" himself accordingly. If A had been known to be unarmed, the quarrel would probably have stopped short of a tragedy.

CAMPING OUT.

"Camping out" is among the summer luxuries of the Denverites. They are already a mile above sea-level, but that elevation is not enough for them. When the hot season comes, all who can afford it go to the mountains, and there, at a height of 7,000, 8,000, or 10,000 feet, enjoy a protracted picnic under canvas, amid magnificent scenery, and in an atmosphere of the most exhilarating character, to breathe which is, as somebody says, "like inhaling champagne." (I cannot myself pretend to say what kind of sensation would be produced by taking champagne into the lungs.) The mountains being now pierced at many points by the wonderful railways which are waiting to be described, business men can leave their families in their tents and go down into the city for a few hours, or for a day or two at a time, returning to their temporary homes when their business is done. Altogether, camping-out is an exceedingly popular institution, and I am sure it must be a very delightful one. Even when the night temperature is rather low, the dwellers in tents appear to make light of the risk of catching cold. The atmosphere, even when cold, is usually very dry, and in this respect Colorado has a decided advantage over our foggy islands.

FLOODS.

The rainfall of Colorado is small compared with the British average, but occasionally the mountains are visited by heavy storms, and on such occasions the Platte and its tributary streams are suddenly swollen to

abnormal dimensions without much warning. The beds of some of these rivers are ordinarily much too large for the streams which flow along them; indeed, in some cases it is not easy to say where the banks really are. The proprietors of the first newspaper published in Denver (the *Rocky Mountain Daily News*, I think) at first pitched their tent—in the shape, probably, of a frame house—alongside the creek already referred to. There was nothing to indicate that the spot they had chosen was other than a piece of honest *terra firma*. So it was temporarily; but one night, in the early days of the city, there was a great storm up among the mountains, and when the citizens rose in the morning, there was no *Daily News* establishment to be seen. The building had, in fact, been built in what was virtually a part of the river's bed; and of course, when the river—just for one night—wanted to stretch himself across the whole width of his bed, why he simply kicked the intruder out. The *Daily News* people found a loftier site for their next office.

SMELTING WORKS.

One of the principal industries of Denver is the smelting of the ore which is produced in such enormous quantities in the mining districts of Colorado. There are two of these establishments in the city, and two others a few miles off, at Golden. The two city smelting works deal with over ten million dollars' worth of gold, silver, and lead ore per annum. This is more than one-third of the total produce of the Colorado mines. The principal smelting establishment, which is known as the Argo Works, is just outside the city; and both there and at Golden clouds of smoke are continually ascending into the otherwise wonderfully clear atmosphere.

THE BEETLE NOT AT HOME.

Whenever I happen to intimate that I have been to Colorado, I am invariably asked if I saw the Beetle. The majority of Englishmen have, apparently, never heard of Colorado except in connection with the insect pest which, a few years ago, threatened—so we were told—our potato crop with destruction. I never knew exactly whether we were in any real danger, but, as a matter of fact, the dreaded insect never came, except in letters to a few curious and reckless people—the sort of folk who would have over a specimen of cholera by post if the thing could only be caught in a tangible form, and got into an envelope. I may as well say at once that I neither saw nor heard of the Colorado Beetle in the State which is regarded as the insect's home, and I am strongly disposed to think that our beetle scare was just a little silly. The only place in America in which I did hear of the beetle was, singularly enough, at the furthest possible point from Colorado—viz., at Quebec. As I approached the Heights of Abraham, I asked the way to Wolfe's Monument of a man who was hoeing potatoes, and it occurred to me to ask him about the dreaded beetle. He at once turned up a potato leaf and showed me one, but he manifested no anxiety on the subject, and his crop, so far, was in splendid condition. That was the only occasion, in the whole course of my journey, on which I either saw or heard of the pest. As I have already intimated, I think the beetle scare was greatly overdone.

AGRICULTURE.

Colorado, like California, owes its settlement to its vast stores of the precious metals. It was about the

year 1858 that the adventurous pioneers of mining enterprise discovered gold dust in the streams which flow down from the Rocky Mountains. When there is gold dust in a river, it follows as a matter of course that there is gold in other forms in the region from which the river flows. It needs no expert to predicate that. The discovery of the dust accordingly caused just such a rush to the mountains of Colorado as, ten years before, had been directed, under similar circumstances, to the Golden Gate. In due time, the wonderful discoveries of California were equalled, if not surpassed, in Colorado, and a new San Francisco sprang into existence under the name of Denver.

But the riches with which California was presently found to abound did not consist exclusively of the precious metals. Men went to dig, and remained to plough. It was found that the riches which were buried beneath the soil of the Golden State were rivalled by those which lay on the surface. The discovery, in short, was made that the country possessed a soil and a climate which adapted it to the production of corn and fruit of the finest quality and in the greatest abundance; and from the position of a purely mining State, California has now advanced and taken her place in the front rank of agricultural States. In this respect, Colorado aspires to follow her lead. The State is no longer exclusively mining. Cattle-raising has already developed into a vast industry, and other forms of agriculture are assuming great importance. The whole truth about Colorado, from an agricultural point of view, is simply this:—The soil of the plains is, generally speaking, extremely rich, and capable of growing anything—on one condition, viz., that it be artificially watered.

WATER WANTED.

And this brings me to the one great drawback of Western agriculture—*Drought*. So far as I could gather, the Eastern and Middle States seldom suffer from a scarcity of water; but soon after the Missouri River is passed, a region is entered in which scarcity of moisture is more or less chronic. Speaking generally, the further West you go, the greater the drought becomes. In Western Kansas, for instance, you pass for hundreds of miles across prairies covered with a thick layer of rich black soil, capable of producing anything. Where the railways happen to pass through shallow cuttings, you can form an estimate of the depth of this surface soil, and can marvel at its absolute freedom from stones. It lies like a layer of soot—it is almost as black, and too often almost as dry. The one thing it needs is water. It is not too much to say that there are in these Western States areas as large as several Great Britains whose value for agricultural purposes depends absolutely on their being supplied with water by artificial means. The prodigious extent of this arid region is one of those features which nothing but a journey across the continent enables one to realise.

What hope is there, then, that such immense tracts will ever be brought under cultivation?

Very great hope, I reply, and I will give my reasons for thinking so. Irrigation has made great progress already in those parts of Colorado which lie nearest to the mountains. Numerous irrigation companies are actively at work. They go up into the foot-hills, seize hold of the mountain streams while they are still at a considerable level above the plains, and divert them into artificial canals, in which they are made to flow at the required height above the level, throughout the district which it is proposed to irrigate. Something like a dozen of these canals are already in use in

different parts of the State, watering probably a million acres. Four of the principal canals are in the neighbourhood of Denver, and these four alone are nearly 200 miles in length.

The calculation of the irrigation companies is that for every cubic foot of water passing along their canals in each second, they can irrigate fifty acres of land. The work is only in its infancy as yet. The area which requires artificial watering is immense, and there is probably water enough flowing from the mountains to irrigate it all. Many of the streams are still untouched, and it may be possible to add to the efficiency of the works already in operation by providing for the storage of the surplus water in the mountains during the wet season and the melting of the snow. Irrigation is undoubtedly destined to work wonders in these Western States. So far as Colorado is concerned, its plains are only awaiting the fertilizing streams from the hills to become one of the richest agricultural regions in the States.

Irrigation, moreover, is not entirely dependent on the canals which bring the water from the hills. There is a vast subterranean supply of water—in the neighbourhood of Denver, at any rate—which is only waiting to be tapped. A few weeks before I visited the city, this fact had been discovered by accident. The president of the Denver Water Company had a notion that there was a bed of coal under an estate of his close to the city, and he proceeded to bore for it. He found no coal, but he found something else. At a depth of 300 feet, his boring apparatus pierced a subterranean reservoir, and a splendid stream of water suddenly rose far above the level of the ground like a grand fountain. His neighbour, a brewer, immediately "went for" the water, and found it at the same depth. When I was there, the city was all excitement over this great discovery, and the newspapers were daily announcing what new wells were being sunk and how the older wells maintained their supply. By the end of the year, sixty wells were in full operation, producing some three millions of gallons daily, and the Denverites were settling down to the pleasant belief that they had beneath their feet a practically inexhaustible supply.

The immediate object of these artesian wells was to supply water for domestic and manufacturing purposes, and the idea of sinking such wells in order to obtain water for irrigation has not yet made much way in Colorado. This, however, will surely come in due time. I shall have something to say presently of the marvellous effects which artesian wells are producing in connection with agriculture in some parts of California, and it may be safely assumed that what the older State has already done in this direction will presently be accomplished also by its younger rival.

THE ROCKY MOUNTAINS.

The Rocky Mountains extend north and south through the whole length of the North American Continent. At the Isthmus of Panama, the range sinks down to the dimensions of a mere rising ground, through which M. de Lesseps, the famous Frenchman who constructed the Suez Canal, is now engaged in cutting a navigable channel which will turn South America into an island, and shorten the route to the western coasts of both North and South America by many thousands of miles. South of the isthmus, the low range again swells rapidly to the dimensions of mountains, and under the name of the Andes the chain extends all along the Pacific coast right down to Cape Horn. With the slight exception of the break at the isthmus, the Rockies and the Andes thus constitute one magnificent and continuous chain,

between 8,000 and 9,000 miles long, extending from the ice-bound shores of the Arctic Ocean on the North to within a very few degrees of the corresponding frozen ocean on the South.

The Andes are much the higher of the two parts of the range, some of their peaks considerably exceeding 20,000 feet. The Rockies culminate in Colorado, through the centre of which State they pass from north to south. But none of the Colorado peaks attain quite as great an altitude as Mont Blanc and two or three of her sister Alpine heights. Mont Blanc is over 15,700 feet. The highest of the Colorado mountains, Sierra Blanca (which, by the way, means precisely the same as Mont Blanc—viz., "White Mountain") is 14,464 feet. Among other peaks (all in Colorado) above 14,000 feet, are Gray's Peak, Pike's Peak, Long's Peak, and the Mountain of the Holy Cross. I may here remark that in the Sierra Nevada, a shorter range further west, on the boundary between Nevada and California, there is one mountain which exceeds in height all these Rocky Mountain peaks. That is Mount Whitney, 15,088 feet, the highest peak in North America.

I have already explained in what respects the Rocky Mountains of Colorado are, in my opinion, less imposing and picturesque than the Alps. Briefly, they have no glaciers and little summer snow. (These remarks, it must be understood, refer exclusively to the mountains of Colorado and the States south of it. They would not be true if applied to the more northern parts of the range, for there are, I am told, some very fine glaciers in Oregon, Washington Territory, and British Columbia.) But the Colorado Rockies have characteristics of their own which are not to be found in the Alps, and which, when you come in close contact with them, cannot fail to excite your admiration and wonder, if there is any impressive material at all in your composition.

PARKS AND CANONS.

The two grandest and most unique features of the Rocky Mountains are their natural parks and their wonderful canons. The so-called parks are vast plateaux which are secluded from the plains by the foot-hills, and sometimes by a second and higher range, and are backed by the loftiest peaks of the central chain itself. These parks cover many thousands of square miles, and are at a height of from 7,500 to 10,000 feet above sea-level. The principal are North, Middle, and South Parks, Estes Park, and San Luis Park. I crossed the South Park by rail, at an elevation of nearly 10,000 feet, and I no longer wondered why it was called a park. Anything more park-like it is difficult to conceive. The grassy expanse, more or less undulating, has scattered over its surface masses of wood so arranged as to produce the most beautiful and picturesque effects. As one rides across, one is tempted to say: "This *must* have been laid out by a landscape gardener," and to ask: "Where's the squire's house?" Quite an effort is needed to rid one's self of the notion that one is crossing a gentleman's park in England. There are modes of dispelling the illusion, no doubt. It is only necessary to raise the eyes from the grassy plain and the clumps of timber to the great barrier of lofty peaks which shuts in the park, and one wakes up instantly to the naked facts. Some of these parks contain beautiful little lakes, in whose calm surface the great mountains mirror their majestic forms with a distinctness of outline and a perfection of detail which are enchanting. When winter comes down from the lofty barrier of peaks, these parks assume new beauties, in which

the strong and courageous lovers of Nature find an unspeakable delight. Miss Bird, in her "Lady's Life in the Rocky Mountains," has given us word-pictures of these regions such as nothing but genuine enthusiasm and real literary genius could have inspired. I am "not in it" with Miss Bird. I feel that it would be presumption and something like sacrilege on my part to attempt a description of what she has already described. I can only advise my readers to read her book. They will rise from its perusal with the impression that the writer is almost as great a phenomenon as her much-loved mountain retreats. The story of her lonely rides through snow and darkness reads like a romance, and some there may be who doubt whether an unprotected lady ever passed through such a series of adventures. Of course, I am unable to vouch for the accuracy of all the details of her story; but I am able to say this—that her knowledge of the Colorado mountains is very minute and correct, and that her adventures attracted a good deal of attention at the time both at Denver and in other parts of the State.

A canon (the word is pronounced "canyon") is a deep gorge by which a stream from the central range finds its way through the lower ranges and the foot-hills down to the plains. The word is a Spanish one, and signifies a pipe or tunnel. The canons are not literally tunnels, but they are sometimes not greatly unlike subterranean channels, so perpendicular are their sides and so narrow the openings at their tops. The geologist sees reason to believe that the canons and the parks were in their origin associated with each other. Parks are believed to be the beds of what were once mountain lakes. The surplus water of these lakes at first found its way down into the lowlands by flowing over the lowest points in the inferior ranges, the said ranges being the dams which maintained the lakes at their ordinary level. But the depressions through which the streams escaped began immediately to grow deeper beneath the incalculably slow but irresistible action of the water; and the deeper they became, the lower, as a matter of course, sank the level of the lake. In the course of untold ages, the channels assumed the form of chasms, of more or less stupendous depth, and the lakes were at last effectually drained, except where deep depressions happened to exist in their own beds. In these cases, small portions of the water were retained, in the form of little lakes which still exist. The process was precisely similar to that which children are very fond of amusing themselves with on the sea-shore. As the tide recedes, they keep back a miniature lake by means of an artificial embankment of sand, and presently they open a chasm through the bank and allow the imprisoned water to escape with a rush. The main difference between their operations and the natural process is that, whereas they produce their channel in a moment by means of a toy spade, the natural chasm is only hollowed out by the ceaseless flow of the patient, sand-laden stream through periods so vast that no geologist cares to attempt to express them in figures.

Such, as I understand it, was the probable origin of both the parks and the chasms, the latter being, as I need hardly explain, the canons which have rendered Rocky Mountain scenery so famous all the world over. I passed through four of the most famous of these canons, and shall presently have occasion to refer to them in detail; but a few facts about some which I did not see will not be out of place here. Colorado, Utah, and New Mexico, all of

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which are traversed by the Rocky Mountains or their associated ranges, abound in these wonderful gorges, the magnitude of some of which is simply stupendous. Professor Geikie recently contributed an article on "Rivers and River Gorges" to the *English Illustrated Magazine*, in which he furnished some most interesting particulars as to the extent and history of the canons in the district in question. The most wonderful of all the gorges at present known is that of the Colorado itself, a river which drains the western slope of the Rockies for some hundreds of miles and flows into the Pacific. No railway has yet penetrated into the gloomy recesses of this mighty chasm, and its finest parts are rather difficult of access; but nobody who has seen what the engineers have already done among these very mountains can for a moment doubt that the Canon of the Colorado will be reached and opened up in due course. Professor Geikie tells us that the stream of the Colorado is for a considerable distance 6,000 feet below the general level of the surrounding country—that is to say, the canon is considerably more than a mile in depth. The sides of the gorge are not perpendicular in this case, as they are in some others. The gorge is, in a sense, a double one. At the bottom of a wide gulf, 3,000 feet deep, there is a narrower chasm of about the same depth; and at the bottom of this inner gorge, in a channel to which the direct rays of the sun seldom or never penetrate, the waters of the Colorado River flow swiftly along towards the distant ocean. Professor Geikie and his brother geologists assure us that every foot of this prodigious chasm has been excavated by the action of the stream itself, and they point to the clear traces of water action on every one of the strata through which the river has eaten its way. As the stream carries along large quantities of sand with it, there is reason to believe that the grinding process was comparatively rapid when the softer strata were being operated on; but, under any circumstances, the period occupied in the excavation of the 6,000-foot gorge must have been one beside which all human chronology is a fool.

The most marvellous of Professor Geikie's revelations about this most interesting region remains to be told. He has assured himself, by a careful examination of the geological features of the region, that in course of time (may we not almost say of eternity?) the soil of an immense tract of country has been carried away to a depth of 25,000 feet, or nearly five miles. The imagination fairly staggers under the weight of such a fact, or such a theory—call it which you like. And yet there is no particular reason for calling the professor's statements in question. Only grant time enough, and the incredibility of the thing vanishes. Time is all the geologists demand, and a very superficial knowledge of their science is sufficient to prove that of this the past history of the world allows them an ample supply.

The erosion which has swept off a five-mile-thick slice of parts of Colorado and Utah, and has excavated a 6,000-foot channel for the Colorado River, is, as a matter of fact, busy before our eyes at this moment. And, I may add, water is not the only agent at work. The sand blast is equally active in many districts. Some of my readers are no doubt aware that the hardest substances—even glass itself—can be ground down or cut by having thrown upon it a strong jet of air filled with fine, sharp sand. Nature works in the same way. Utah and parts of the neighbouring States and Territories abound in high cliffs, standing up gaunt and bare above the sandy plains. The region is a very dry one, and the loose sand on the

surface is frequently blown about by furious blasts. The sandstorms which are thus hurled against the bases of the soft cliffs undermine them in time as surely as the waves undermine a similar cliff on the sea-coast, and with a similar result—a slice of the cliff comes down. The wind which brought it down at once begins to break it up and blow it away, and in due time the ground is clear for another assault on the base of the cliff, and the process is begun over again. The sand thus blown away naturally drifts into the canons which score the country so deeply in various directions. Falling at last into the torrents which rush through the gorges, it assists the water to grind the gulfs still deeper, and in due time it goes to assist in building up a sandbank in the ocean, off the mouth of the river with which it has cast in its lot.

So much for river gorges in general. I will now give some account of one which I traversed, and of the mining district of which it forms the only gate.

CLEAR CREEK CANON.

"Of course, you'll go up the Clear Creek Canon," said my Denver friend to my companion and me, as soon as we began to discuss how much of Colorado we could "do" in a week. We "guessed" we would, if he, who knew all about the district, thought it the proper thing to do. We accordingly went, our Denver friend accompanying us.

The railway which threads the whole length of Clear Creek Canon is one of a network of mountain lines belonging to the Union Pacific Company. This Company's main lines across the plains are fine roads on the English gauge (4ft. 8½in.) I have already described one of them—the line by which we travelled from Omaha to Denver. But the rails of the mountain lines are only three feet apart, and the rolling stock is light in proportion. Possibly it is not quite so light as a stranger would expect to find it. As a matter of fact, the width of the cars on these narrow-gauge lines is the most surprising feature about them. They are narrower than the standard-gauge cars, of course, but they overhang the wheels so much on each side that the difference does not seriously interfere with their carrying capacity. The seats on each side of the central passage accommodate two persons, as in the wider cars, and the sleeping cars are arranged in precisely the same way as on lines of the standard gauge. The central passage is, however, somewhat inconveniently narrow, especially in the case of "sleepers."

It is probably in the engines that the greatest gain is made in the direction of lightness. These are certainly miniature concerns compared with the massive locomotives of the main lines, but they are wonderfully well adapted to the kind of work they have to do. That work consists mainly in turning sharp corners and mounting tremendous inclines, and nobody fully understands what can be got out of a locomotive who has not seen one of these little engines at its work on a road like a corkscrew, with a rise of 200 feet to the mile. The wheels of these narrow-gauge locomotives are small even in proportion to the size of the engines themselves. Three pairs of stout wheels, but little more than a yard in diameter, are coupled together on both sides. Nearly the whole weight of the engine is upon these six driving wheels, and if one pair slips, all slip.

There is nothing remarkable about the first 15 miles of the run towards Clear Creek Canon. The route lies straight across the plain to the city of Golden, and as the foot-hills are approached, the view of the great

central chain is gradually lost. But as soon as Golden and the ever-present cloud of smoke ascending from its smelting-works are left behind, the interest of the journey suddenly begins. The train makes straight for the hills, which here rise abruptly out of the plain. It is difficult at first to see where it is going, unless there is a tunnel whose entrance is as yet hidden. But in a few seconds the mystery is cleared up. The entrance to a narrow, tortuous gorge comes into view, and out of that gorge rushes a brawling stream, which at the time of our visit was so shrunken as to occupy but a small part of its bed.

But why, oh! why, do they call this stream Clear Creek? In the English sense, it is not a creek, and in no sense at all is it clear. But the Americans apply the word "creek" to any kind of small stream, and it is useless to dispute that point with them. And as to the supposed clearness of the creek, why it was clear once, before two cities had turned it into a common scavenger, and thrown upon it the task of carrying all their mining refuse and still more objectionable matters down towards the plains. The "clearness" of the creek now consists of an appearance like that of very dirty whitewash.

But there is no time to waste in shedding useless tears over a spoiled mountain stream. In front, behind, around, the marvels thicken fast. The train is fairly in the gorge. Now on a narrow ledge blasted out of the solid rock, now on made ground cribbed from the bed of the torrent itself, the gallant little engine toils up the winding steep, followed by a train of cars which, as it winds in and out, following the endless sinuosities of the chasm, looks like a gigantic serpent on the move. On both sides, the canon is walled in by almost perpendicular cliffs, rising often to a height of many hundreds of feet. These cliffs, where not too perpendicular to sustain timber, were formerly well wooded; but they have been almost entirely cleared of their trees, which were in demand for mining purposes, and the cliffs have thus been robbed of one of their most beautiful features. As for the windings of the gorge, I despair of being able to convey any adequate idea of them. Take the most tortuous stream that meanders through the meadows of a level English county, and imagine that, without having its shape altered, it is sunk 500, 1,000, or 2,000 feet deep into the soil, so that you may look down upon it from the verge of a tremendous chasm. Give it a fall of 150 or 200 feet to the mile, so that, instead of flowing along placidly and gently, its waters may rush impetuously, dashing themselves into foam against great boulders strewn in the river bed. If you can imagine all this, you may begin to obtain a dim conception of Clear Creek Canon. But if the canon is a natural marvel of the first class, the railway which threads it is certainly as great a wonder mechanically. Those who have seen only English railways would probably declare it impossible to work such a line, and their scepticism would be excusable.

There is not a single moment of the hour and three-quarters occupied by the train in threading the 20 miles of this canon, when there is not something interesting or wonderful to see out of either one side of the car or the other. You look out of the window to your left, and are startled to see a locomotive, followed by a train, rushing away in a direction at right angles to the line you are following. For a single moment, you are tempted to think that another railway must cross your own line on the level just ahead; that, through some carelessness, a train has been allowed to pass the

crossing at full speed, and that you are running full tilt into the side of that other train. Before you have time to get these ideas fairly through your brain, you find the leading wheels of your own car sweep quickly round towards the left, and you at once wake up to the fact that the engine which was running away from you at right angles is the locomotive of your own train, and that both it and you have simply swept round a rather sharp curve. If you look for the locomotive again a few seconds later, you will find that it has taken an equally sudden turn to the right, and has entirely disappeared, with the leading car, behind a jutting headland of rock. And so the wonderful game of hide-and-seek, of popping behind rocks and popping out again, of rushing round the sharpest of curves alternately to the right and to the left—the endless game of "Here we go up—up—up, and here we go round—round—round"—goes on until the whole twenty miles have been traversed. To one thing the line remains constant throughout, endless as its wanderings seem to be. It never leaves the river side for a moment. It is not very easy to see how it could, for there is no escape from the tortuous chasm except up the almost perpendicular cliffs which wall it in. At no point is the line ten yards from the brawling torrent. In a few places, where the turns were too sharp even for American engineers, the curves are slightly eased by means of short cuttings through rocky promontories; but, with these few and insignificant exceptions, the rails are close to the water, and not far above it, all the way. They are not always on the same bank. The stream is, indeed, crossed from side to side repeatedly. The narrow gorge gave so little latitude for the manoeuvres of the engineers, that they were sometimes compelled to cross the stream merely to obtain room for the wonderfully sharp curves which they think it safe to work. The stream and the railway monopolize the gorge. There is no carriage road through it, and it is difficult to see how room could be found for one, even of the narrowest kind. As I before intimated, the bed of the river has been narrowed in many places to make room even for the railway. The stream was too feeble and shrunken when I saw it to resent this inroad on its legitimate territory; but I should not be surprised to hear that it sometimes asserts its ancient rights in a somewhat troublesome fashion when swollen by heavy rain or melting snow.

The scenery of the gorge changes every moment. Sometimes, the cliffs are so perpendicular that not a scrap of sky can be seen except by thrusting the head out of the car window. Presently they become less precipitous, and are broken up into groups of spires and castellated masses, of the most fantastic shapes and gigantic dimensions. Sometimes, tremendous rocks, whose foothold appears terribly precarious, fairly overhang the line, in such a way as to suggest to the timid traveller that the mere vibration caused by the passing train may be enough to bring them down upon the fragile cars, with such results as may be expected when an elephant steps on a match-box. Whether accidents have ever arisen in this way I do not know; but it is certain that falls of rock must occur occasionally, and great vigilance must be needed to prevent the trains from running into the debris.

The whole of the sand in the bed of Clear Creek has been washed and examined over and over again for gold-dust. Those who were lucky enough to have the first turn at it reaped a splendid harvest; but in their

haste they left behind enough of the precious metal to make it worth while for a less fortunate set of searchers to examine it all over again. And now the patient, frugal, and easily-satisfied Chinaman is washing out what little the second set left, together with such few grains as may escape from the works at the head of the canon. Scores of these Celestials may be seen from the train, standing up to the hips in the shallow parts of the stream, manipulating the simple apparatus by which the precious grains are separated from the masses of sand which in these parts form the bed of the creek. The native American laughs at John Chinaman for engaging in an occupation which produces such modest and uncertain results; but in doing this John affords an apt illustration of his patience and frugality. He is said to have a good many faults, but it is only fair to recognise such virtues as he displays.

A passenger of a mechanical turn of mind, having once passed through the canon, will be very likely to examine the train, to ascertain, if he can, how cars of such enormous length can possibly be made to run round curves with a radius little greater than that of a circus ring. He will find that, although the bodies of the cars are long and rigid, they are suspended at each end upon a bogie truck consisting of four very small wheels, close together. The car is attached to each bogie by a central swivel, so that the relative positions of the car and its bogies are free to change to almost any extent. The result is that the body of the car stands across a sharp curve very much like the chord of an arc. Its leading bogie is moving in one direction, while its hind bogie, being on a distant part of the curve, is moving in a direction appreciably different. Thus is rendered possible the apparently impossible task of running the longest of cars over the crookedest of lines. The speed is, of course, very moderate, but it varies every minute, according to the sharpness of the curves. The driving is, indeed, marvellous in its skilfulness. The trains are fitted with Westinghouse brakes, and are under the most perfect control. As the engine approaches a particularly sharp curve, the brake is applied for a few seconds, and the speed thereby reduced to (say) 12 or 15 miles an hour; but before the last car is fairly round the point, the brake is again off and the speed nearly pulled up to its former rate. In going up the canon, the train rises over 2,300 feet in 20 miles, and the journey is one long pull against collar. It is when coming down without steam that the skill of the driver is best seen. He simply keeps his hand on his brake, and either "lets her go" or checks "her" according to the sharpness of the curves.

The end of the canon is at the mining city of Black Hawk, 8,057 feet above sea level and nearly 3,000 above Denver. The line is, however, continued four miles further, in order to reach Central City, distant one mile in a straight line. The truth is, Central is nearly 500 feet above Black Hawk, and the ascent could only be climbed by means of a gigantic zigzag on the bare mountain-side. The line doubles back at Black Hawk and gradually climbs the side of the canon, which has here broadened out into a valley of respectable dimensions. Having gone back to the left about two miles, it turns suddenly to the right, and, rising rapidly all the time, reaches Central in about two miles more. Central is more than 8,500 feet above sea level—quite high enough, as I found, to test those whose physical energies are affected by a highly rarefied atmosphere.

BLACK HAWK AND CENTRAL CITY.

These are two mining cities, remarkable for situation, but unlovely in appearance. They are built on the steep sides of narrow, abrupt valleys—the upward continuations of Clear Creek Canon. Nobody lives in them except the people connected with the mines and ore-crushing works, and the traders who supply their wants. As the combined populations amount to several thousands, the importance of the mining operations may be imagined.

As Central is 500 feet above its sister city, we naturally remained in the train until it had climbed the remarkable zigzag already described; for where was the use of compelling our limbs, in that rarefied atmosphere, to do what the locomotive was able and willing to do for us?

In the autumn of 1880, I spent several days at the hotel on the Eggischorn, 3,000 or 4,000 feet above the valley of the Upper Rhone, and about 7,300 feet above sea-level. I there discovered that rarefied mountain air produces very curious effects on some people, myself among the number. The effect in my case was to render me intolerably sleepy, and to rob me of all power of serious exertion. I could walk gently about on the level by the hour, but any attempt to ascend higher up the mountain was at once checked by a physical exhaustion which was as surprising as it was inconvenient. I was compelled to rest at intervals of a hundred yards or so, and every foot I ascended aggravated the symptoms. By dint of great perseverance, I did at last contrive to reach the shoulder of the mountain, and to look down upon the Great Aletsch Glacier (the largest in the Alps), and to gaze into what may be called the back-door of the Bernese Oberland—the southern side of that mighty collection of snow-capped peaks which clusters round the Jungfrau and the Finsteraar Horn. But the bare summit of the Eggischorn, crowned with its great wooden cross, still rose high above me on the left. Men and women, apparently no sounder in either wind or limb than I was, were ascending and descending it with ease. But that height was not for me. I had to content myself with the lower point of view, and the more restricted, though still glorious, sight.

These strange experiences prepared me somewhat for those which awaited me in the Rocky Mountains; and I was therefore not greatly surprised when I found that I was positively incapable of walking many yards at a time in the chief street of Central City, especially where it happened to be uphill (and I need hardly remark that every yard in that city is either uphill or downhill—very much so). My chief recollections of Central City are that a friend of my Denver friend met us at the depot and did the courteous and handsome by us—found us a good dinner, introduced us to the postmaster, who had most kindly prepared for me beforehand a valuable collection of specimens of the numerous minerals with which the region abounds, and finally chartered a hack to drive us down to one of the Black Hawk mines, and finally to deposit us at the lower station for the return train.

The mine we visited was simply a long tunnel, large enough for a railway, driven horizontally into the heart of the mountain. A narrow-gauge line of rails for the little mine waggons extended the whole length. With the aid of candles, we penetrated to the end of one of the branch workings, where a number of mine's were excavating ore of remarkable richness. The roof of the tunnel was seamed with rich veins of metal which, in the light of candles and lamps, shone out with great

brilliance in contrast with the darker and duller material in which they were embedded. From the mine we drove down the valley to a crushing mill, where the gold-bearing quartz is broken up by means of "stamping" machinery. The crushed material—mere coarse sand, apparently—is washed down an inclined plane by an endless flow of water, and the grains of the precious metal which the crushing has liberated are collected by means of mercury, for which gold has a remarkable affinity. The disintegrated quartz pours out with the waste water into the stream, and does its best towards making the name of Clear Creek the misnomer which I have already declared it to be. From the mine, we drove to Black Hawk Station and there waited for the train.

I have said that both Central and Black Hawk are unlovely, and as towns they are certainly all that—and more. But their surroundings are by no means common-place. The valleys in which they stand rise rapidly towards still higher valleys, and these are backed and hemmed-in by the giants of the central range itself. To that range the Americans have given the appropriate name of the Great Divide—the ridge which divides the waters. On one side of that ridge, the streams flow down into the Platte, the Arkansas, and other tributaries of the Mississippi, and thus find their way to the Gulf of Mexico. On the other slope, the water flows down into the valley of the Colorado, and, traversing its wondrous canons, emerges into the Pacific Ocean. There is, of course, a line on this ridge from which the ground slopes away in both directions, and whether a drop of rain turns towards the Pacific or towards the Atlantic depends upon the exact locality of the spot on which it falls. If it falls here, it goes to the Atlantic; if there, a yard further west, it goes to the Pacific. An American writer has expressed this fact in real American fashion. Referring to the moisture which drops from the roof of Alpine Tunnel, which passes through the highest ridge of the Rockies, he says:—

"Two drops of water, such as continually fall from the roof, alight but half-an-inch apart. Trembling a second in the balance, each starts with his fellows, and when, finally, they join the ocean, there is the span of a continent between them." This sounds very wonderful, and so, indeed, it is; but the wonder varies only in degree, and not in kind, from the phenomena which are before our eyes on the ridge of every English range. Whether a drop of rain which falls on one of our hill ranges in Somerset, Dorset, Wilts, or Devon, shall flow into the English Channel or into the Bristol Channel, depends upon the exact spot on which it alights—whether a foot on the one side or the other of the actual summit. The illustration drawn from the Rocky Mountains strikes the imagination more forcibly, simply because of the immense journeys which the streams make in opposite directions, and the vastness of the space which divides them when they finally reach the bosom of their Mother Ocean.

At a point about seven miles below Black Hawk, called Forks of the Creek (shortened to Forks Creek), the canon divides, or forks, as the name just quoted indicates. The branch chasm—containing, of course, a branch torrent—has its branch railway also, which was at first constructed to serve Idaho Springs (a famous health resort), and Georgetown, a mining city as high up as Central, and in a still more extraordinary, and apparently impossible, situation. But the Union

Pacific Railway Company, with its usual enterprise and daring, has recently pushed the line eight miles further up the gorge, to the very foot of Gray's Peak, and this short extension comprises one of the greatest engineering triumphs on the continent. The rise of the valley at one point was so rapid that even a Colorado locomotive could not fairly be asked to scale it. The engineers were accordingly compelled, in the narrow limits of that gorge, to double back twice—that is, to parallel their line four times, and, in one part of this remarkable tangled loop, to carry the line over itself on a high girder bridge. In ascending this valley, therefore, the train passes the same point five times—three going forward and twice doubling back, the level being higher, of course, at each succeeding passage. By the time Graymount is reached, so high a level is attained by the line that Gray's Peak is brought within easy reach of all except those who, like myself, are robbed of physical energy by the mountain air. I have recently met, in a Denver publication, with the following amusing and characteristic remarks about the famous "loop" just described:—

"It is amusing to hear comments upon the Loop. This is what is formed by the Colorado Central road crossing itself. People enquire why it crosses itself. They wonder why a straight line is not preferable to so much crookedness. They make me some weary. It is not to be presumed that building track at 50,000 dollars per mile is wildly hilarious pastime. My idea is that it was built that way because it is impossible to ascend more than a given number of feet in a given distance. It would not be right to ask an engine to climb a stone wall, so they went around it. That is all that the Loop is for, and that it has a picturesque effect is merely a pleasant incident. When railroad iron is tied into a double bow knot, it is not for the fun of the thing."

ON TO LEADVILLE.

WONDERFUL MOUNTAIN RAILWAYS.

The morning after our visit to Black Hawk and Central, my companion and I started from Denver on a somewhat similar but still more memorable journey. At 8.20 a.m. we entered a Union Pacific train for Leadville, 171 miles distant, up among the mountains, and about seven o'clock in the evening we reached our destination. The railway to Leadville, like all the lines to the mountain towns and mining camps, is on the narrow (or three-foot) gauge, and penetrates the foothills through one of the many canons already described. For some 20 miles, the line at first traverses the plain. It then plunges into the Platte Canon just as abruptly as the Central City and Georgetown branch enters the gorge of Clear Creek. A description of one of these two canons applies equally well to the other. Both have their champions. Some say that the Clear Creek gorge is the finer, while others stand up bravely for the Platte Canon. I cannot pretend to decide a question which is still in dispute between those who know both intimately. All I can say is, that both are very wonderful both in their beauty and their awe-inspiring grandeur. So much as regards quality. In the matter of quantity, there is a difference. There is two or three times as much of the Platte Canon as of the other. The Clear Creek Canon is barely 20 miles long, while the Platte Canon is about 50. And the whole of this 50 miles of line, be it remembered, is just as winding as the 20 miles in the other gorge, though not quite so steep. At the entrance to Platte Canon, the rails are about 5,500 feet above

sea-level. At is about 9,000 feet in 50 mile

Having reached that at Black and begins to descend a gradient average between Webster seven miles—telling. Kenosha 10,000 feet above level of Denver country at the of things to in sonally, I should I alighted from yards, or to ex would have collapsed into But, sitting and, judging within a few matter of fact. On both sides described street reality, imman ate by the won and by the sn which formed too grand a scene near distance.

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sea-level. At the upper end of the canon, the elevation is about 9,000 feet. That is to say, the line rises 3,500 feet in 50 miles.

Having reached the end of the gorge, the line, like that at Black Hawk, doubles back towards the left, and begins to climb the mountain side by a zigzag on a gradient averaging nearly 150 feet to the mile. Between Webster and Kenosha Stations—a distance of seven miles—the train rises just 1,000 feet without halting. Kenosha summit once attained, the train is just 10,000 feet above the sea, and nearly a mile above the level of Denver. But once on the comparatively level country at the top, there is nothing in the appearance of things to indicate that one is two miles high. Personally, I should soon have discovered where I was, had I alighted from the train and attempted to run 100 yards, or to exert myself in any similar way. My limbs would have given way under me, and I should have collapsed into a little helpless heap of drowsy humanity. But, sitting quietly in the car, I felt no ill effects; and, judging from what I saw, I might have been within a few feet of sea-level. We were, as a matter of fact, skirting the beautiful South Park. On both sides of us, the park-like landscape already described stretched away to distances that were, in reality, immense, but were rendered apparently moderate by the wonderful transparency of the atmosphere, and by the snow-capped peaks of the Great Divide which formed the background to the park, and afforded too grand a scale to apply to lengths and heights in the near distance.

From Kenosha summit, the line gradually descends for nearly 40 miles, getting down in that distance to about 8,960 feet. Then it turns upward again for a few miles, but presently descends to the rather low level of 7,588 feet at Buena Vista, 136 miles from Denver. Here it unites with the Denver and Rio Grande Railroad, and the trains of both companies climb the same rails from this point to Leadville. I use the word "climb" with good reason; for between Buena Vista and Leadville, a distance of 35 miles, the level rises from 7,588 feet to the amazing height of 10,200 feet, and there, at that giddy altitude, it finds a six-year-old city of 25,000 inhabitants.

I shall have something to say presently about the city and my adventures therein, but I must not leave the subject of the railway by which I reached it without adding a few words as to the latest and most wonderful achievements of the Union Pacific Company in that most difficult region. The line to Leadville, by way of Buena Vista, although vastly shorter than the alternative route round by Pueblo, was still too circuitous to please the Company, and since my visit they have opened a new link, which cuts off many more miles, and carries the traveller much farther skyward than any part of the older line. I cannot speak of this new link from personal observation; but, judging from descriptions I have read, it is associated with some of the most remarkable engineering and some of the finest scenery in the world. Between Como, the point of junction with the older line, and its terminus at Leadville, this new link crosses the main ridge of the Rockies twice. At Boreas, between Como and Breckenridge, the crossing is effected without a tunnel at a height of 11,498 feet. This is as high as the highest foot passes of the Alps—passes which can only be traversed by experienced mountaineers, under the care and direction of guides. Boreas is the highest point but one attained by any railway in North America.

The one exception is between Buena Vista and Gunnison. Here, at Alpine Tunnel, the Gunnison trains of the Union Pacific Company roll through the ridge of the Great Divide at a height of 11,023 feet above tide-level. Those of my readers who happen to remember that the Mendips in Somerset and the highest hills in Dorset are about 1,000 feet high may form some idea of the elevations attained by the Colorado railway engineers. With the exception of one pass over the Andes in South America, Alpine Tunnel is the highest point reached by any railway in the world. The famous St. Gothard Railway through the Alps, whose opening two or three years ago excited, and justly excited, great interest throughout Europe, does not reach an elevation of 4,000 feet at any point. The difference between the European mountain lines and those of America consists mainly in this—that the engineers of the former go through the mountains, and the latter usually go over their tops, whatever their height. Alpine Tunnel, on the Union Pacific line to Gunnison, is quite an exceptional phenomenon in Colorado, and even that tunnel is only a third of a mile in length—cutting, in fact, through the mere crest of the range. But of the two greatest tunnels in the Alps, the Mont Cenis is six miles long, and the St. Gothard over eight miles. The lines, indeed, ascend in each case to only a very moderate height, and then make a straight cut through the very heart of the mountains. Even if both the Mont Cenis and the St. Gothard went clean over the top, they would not attain such heights as the two Colorado passes I have described. It would, under any circumstances, be impossible to carry railways to heights of 11,000 or 12,000 feet in the Alps. Those mountains, at such heights, are simply masses of ice and snow, which never melt. But the snowfall in the Rocky Mountains is comparatively small, and the climate altogether more genial, and what is impossible in Switzerland is accordingly possible in Colorado. The American mountain lines are, of course, sometimes blocked with snow in the winter, even though they are for many miles protected by snow-sheds; but, on the whole, the companies prefer to risk such occasional inconveniences rather than incur the vast cost of piercing the ranges at lower levels by means of tunnels.

A CITY TWO MILES ABOVE THE SEA.

With the exception of two or three places in South America, Leadville is the highest town of any size in the world. It is 10,200 feet, or almost exactly two miles, above sea-level. It is a very wonderful place, but a very unlovely one. I cannot imagine a person taking up his residence there, unless he is largely interested in the mining business which has created the city in the short space of five or six years. For it is a city of shanties. Only one of its streets (Harrison Avenue) contains any considerable proportion of stone or brick buildings; almost all the others consist mainly of wooden dwellings, many of which are rough, weather-stained, and ugly. Moreover, the immediate surroundings of the city are far less picturesque than the great height of the place would lead one to suppose. The truth is, the place is too high to afford an imposing view of the mountains. The highest peaks in its neighbourhood are dwarfed to very moderate elevations when looked at from so high a standpoint, and, as I have already intimated, the Rocky Mountains are wanting in some of the features which constitute the greatest charm of the Alps. One needs to stand off at

a distance to secure the most impressive view of a great range. To look at it from one of its loftiest summits is like viewing a grand cathedral from the top of one of its pinnacles. One sees the roof to advantage in such a case, no doubt, but no conception of the elevation is obtained.

In spite of all this, I strongly advise everybody who visits the Western States, and who can stand an elevation of 10,000 feet, to go up to Leadville by all means. The wonderful scenery, and almost equally wonderful engineering, to be seen on the road thither are ample compensation for the expenditure in time and money.

California Gulch, in which Leadville partly stands, was a rich gold-producing district more than twenty years ago. The produce at one time reached £600,000 in a year, but it gradually fell off until 1866, when the place was abandoned—but only for a time. The miners left behind the rude huts in which they had lived. The chinks in the wooden walls of these huts had been stopped with mud, and one day a pair of sharp eyes discovered that this mud had enough silver in it to make it worth £80 a ton. The tide of population, which had ebbed down to low-water mark, began to flow again as soon as this discovery became known, and within five years it had risen to something like 20,000 or 25,000. With the silver, its usual concomitant, lead, was soon found in immense quantities, and this metal has given its name to the town. Oscar Wilde was so shocked at the marriage of Anglo-Saxon and French in the name of a place called Griggsville, that he declares he refused to lecture in the place unless the inhabitants would consent to rechristen it. They thought the matter over, and decided that they would suffer greater inconvenience from changing the name of the city than from missing the æsthetic poet's lecture. So Oscar passed Griggsville by. But he was inconsistent enough to go to Leadville, although its name displays the same barbarous combination of English and French which had proved too much for him in the other case. However, the name of Leadville expresses a great fact very clearly, much as it may grate on the super-sensitive ear of the prophet of the "utterly-utter" school. The name, of course, simply means the City of Lead, and the place is true to its name. It is the richest silver and lead producing region in the world. The small county in which Leadville stands produced last year over fifteen million dollars' worth of ore, or considerably more than half of the whole mineral produce of Colorado for that period.

The miners are a race of stalwart giants, and the wonder is how they contrive to insert themselves into some of the tiny shanties in which they live. They have some very good qualities. They work hard, and are generous, and frank in their bearing. But they drink and gamble a good deal, and are too much given to settling their drunken disputes with revolvers. Oscar Wilde says that, when he lectured to "a quiet, well-armed mob" at Leadville, he read to them many passages of the biography of Benvenuto Cellini; and they were so amused by the account that they came round afterwards and asked why he had not brought Cellini to Leadville. He explained that Cellini was dead, and they at once said, "Dear me! who shot him?" They were unable (he said) to conceive any method of quitting life other than the one usual in Leadville. This is no doubt a little romance of Oscar's, but it is not a bad one, for it only illustrates in a rather exaggerated fashion the extent to which "shooting at sight" has before now prevailed in some of the out-

the-way mining camps. In one place, it is said, the traveller is shown a cemetery where not a single man has been buried who has not "died in his boots." Oscar Wilde says that, after he had lectured, some of the miners took him to a dancing saloon, at the end of which was a piano and the typical pianist playing. On the wall, right over the piano, was printed a notice—"Please don't shoot the pianist. He is doing his best." Some one (Oscar said) had once published, in a book, statistics of the mortality amongst pianists in Leadville, and these statistics were so much beyond the ordinary average that the city used to find a difficulty in getting musicians.

This is all very excellent fooling, but it must not be taken too literally. The naked truth has, however, often been sufficiently startling in the early history of Western mining camps.

But Leadville is not utterly given over to gambling, drinking, and shooting. It has a mayor and corporation, a recorder, three daily papers, three banks, two theatres, seven schools, and an undefined number of churches. Mr. Lucy, of the *Daily News*, who was in the city shortly after my visit, had some difficulty in obtaining information about churches. Some of the citizens of whom he inquired did not believe there were any; but at last he found one man who said he felt sure there was one church "around somewhere," but he could not for the life of him indicate its exact locality.

The men of Leadville make money fast, and in the case of too many of them the motto is: "Easy come, easy go." In the early days of the place, fortunes were amassed even faster than they are now. Although frame houses are built so rapidly in such a place that they are sometimes begun in the morning and slept in next night, house-building did not at first keep pace with the enormously rapid growth of population. Those were the days when men gladly paid a dollar a night for the privilege of lying on the bare floor of a flimsy shed, and being strictly restricted to a space measuring about six feet by two feet. The owner of such a shed was almost as much in luck as the man who had struck a rich vein of silver. But "lodging" of this kind was not proportionately dear. Every other necessary of life fetched fabulous prices. The connection of Leadville with the outer world by rail has, of course, done something to reduce charges; but even now they are probably higher than at any other city of the same size in the States; for the cost of constructing, maintaining, and working the railways is immense, and the fares and rates for goods are necessarily very high. But then if people will spend their lives in burrowing in the earth for silver at a height of two miles, they can hardly expect to be fed and clothed and housed as cheaply as the ploughmen in the plains.

Mr. Lucy (already referred to) gives the following account of the visits he paid to the miners' places of amusement. The miners appear, by his account, to take their pleasure rather sadly:—

"Leadville has a continental reputation for being a wicked place, and it is understood that the orgies of the miner are too awful to be contemplated. I had the opportunity of going to see the miner at his worst, and found it run largely to dullness. The first place visited is known as the Carbonate Beer Hall. This is in State Street, admitted to be the bad street of Leadville. On entering the Beer Hall, the visitor is faced by a placard entreating him to 'patronise the bar.' An admission fee of 1s to the body of the hall and 2s to the boxes is nominally fixed, but not strictly enforced. It is from the profits on the sale of liquor that the establishment is maintained, and

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when it is mentioned that a bottle of beer is charged at the rate of 4s 2d, and a thimbleful of bad whisky a shilling, it will be understood that this source of revenue does not fail. Inside were gathered about 40 men taking their pleasure with infinite sadness. One or two had abandoned the struggle against the weariness of it, and, laying their heads on the table, soundly slept. The hall was furnished with beer-stained tables and dirty chairs. A gallery ran round the upper part, empty, save so far as the soles of a pair of boots seen over the front of one of the boxes indicated the presence of a gentleman. On the stage were two men in tights, forlornly dancing to funeral music provided by an orchestra consisting of a violin and a piano. When the dance had drooped to a conclusion, the dancers ducked their heads and retired, immediately coming forward again, bowing as if they had been recalled by an enthusiastic audience, and recommencing in obedience to an imaginary encore. As a matter of fact, there had not been a sound or gesture of applause. The profound sorrow that brooded over the audience was too heavy to be thus uplifted. The only busy people in the place were the wife of the pianist, who sat by him industriously sewing, and the women who sold drink. These latter are called beer-juggers, and fill a large place in the evening life of the miner. They work on commission, receiving 5d for every jug of beer sold at a dollar. They have tickets, which the bar-tender punches upon each transaction, and at the close of the evening a cash settlement is made. It is obviously to their interest to make the miners drink, and to that end they indulge in blandishments which relieve by a single touch of vice the level dullness of the night's entertainment. One of the beer-juggers, taking note of the pair of soles displayed from the box, went upstairs, and confirmed the suspicion that there was more in them than met the eye by rousing up a gigantesque miner and inducing him to purchase a bottle of beer. The Zoo, a somewhat similar establishment, of higher pretensions, placards its portico with the injunction: 'For Wine, Women, and Fun, walk straight ahead.' Admission here is 2s, and is more strictly enforced. Perceiving opportunities for business, a beer-jugger showed us into a private box. We ordered a bottle of beer, which she brought with three glasses, and, uninvited, as a matter of course, poured a glass out for herself and drank it whilst lamenting the slackness of the times. One substantial reason why the fun here and elsewhere so grievously flagged was that pay-day was approaching. The miners are paid only once a month, and at this epoch a dollar for a bottle of beer, though served with a leer from a repulsive creature in woman's dress, was a little dear. At the end of a month, a miner finds himself in possession of from £25 to £30, and, as a corollary, has what he calls a blow-out. These are the halcyon days of the beer-jugger. There are not infrequent occasions when a miner is cleared out in a single night, and starts on the morning after pay-day with only a single dollar out of the hundred he had earned. The boxes at the Zoo were fairly filled, a moiety of the occupants being harlots, painted, noisy, and in all ways loveless. These women have their claim upon the consideration of the citizens, since they contribute largely to the relief of the rates. They are required to pay a pound a month for their license, and for the in-gathering of this revenue there is a municipally-appointed collector. Should the five dollars in any case be lacking, the Corporation sternly awakes to the sin of the thing, and the woman is cast into prison. If the five dollars be forthcoming, all is well. Over the stage-box at the Zoo is printed an injunction to 'Step in and see Pap Wyman on your way home.' We did so, and found Pap beaming over much business. He is one of the oldest residents in Leadville, and started the first regular gambling-house. He is now getting up in years, and has developed some eccentricities. At the little counter where he dispenses drink is a box in which is placed a Bible, so that a gentleman in the interval of playing euchre, or whilst refreshing himself with a cocktail, may read a verse or two. Over the clock face is written 'Please don't swear,' and under strong provocation Pap has been known to enforce this request with a round oath. I visited several

gambling dens, and found prevailing everywhere the same quiet, bordering upon dull melancholy. The proprietors of the gambling dens, like the lessees of the drinking and dancing saloons, are pining for pay-day."

INTOXICATING EFFECTS OF MOUNTAIN AIR, ET CETERA.

I knew, of course, that at a height of over 10,000 feet any considerable exertion was, in my case, out of the question. It was already evening when my companion and I reached Leadville, and we contented ourselves for that night with strolling very leisurely through two or three of the principal streets, and looking into the saloons and places of entertainment so graphically described by Mr. Lucy. We had gone to Leadville for the sake of the journey, more than for the purpose of closely inspecting the place; and as we had to rise early next morning to catch the only day train back to Denver, we retired to rest at an unusually "proper" hour. Our rooms were next door to each other on the first floor of the hotel. Mine had two windows, looking out into a sort of narrow side court, the appearance of which was not attractive or reassuring, and which was at no great depth below me. I, therefore, took the (perhaps) excessive precaution of shutting both windows close and fastening them—a kind of thing I had not done at any American hotel I had previously slept in. The air at a place so near heaven—physically near, I mean, according to the traditional notion—is thin enough at all times. For some kinds of lungs, there appears to be too little of it in quantity, and fresh supplies of what little there was I suppose I shut out when I closed my windows. Anyhow, the morning showed that there was something seriously wrong in the relations between myself and the Leadville atmosphere.

My friend rose betimes, knocked at my door and got a very sleepy "All right!" for answer, and then went down to breakfast. Finding that I did not put in an appearance, he hurried through his meal and came up to my door again. Again he knocked and called, but all in vain. A drowsy and almost inarticulate response was all he could get out of me. My door was locked on the inside, and he could do nothing but keep up his shouting and his knocking. This he did most vigorously and perseveringly for nearly half an hour. So, at least, he tells me. I have no recollection whatever on the subject of the lapse of time. At last, finding it impossible to induce me to get out of bed, or to return any coherent reply to his repeated calls, my friend grew seriously alarmed and went downstairs for assistance. He soon returned with a porter or waiter, and the two made a final and united effort in the way of noise, before resorting to the extreme measure of breaking open the door. I suppose the two-man-power row partially brought me to my senses, for I at last fell out of bed (I was powerless to stand), and, under the guidance of my two besiegers, crawled slowly to the door. After repeated efforts, I managed to turn the key, and at once fell back helpless. There I lay, obstructing the opening of the door, and it was only by pushing me away by means of the door that my friend and his aide-de-camp were enabled to enter the room. They placed me on my bed and one of them went down for the landlord. Of the opening of the door and all that followed I have an exceedingly misty recollection. The tumble out of bed apparently aroused me a little, although the moment I was again between the sheets a sensation of inexpressible drowsi-

ness again came over me. I felt as if I simply wanted to be let alone to sleep for a month. So overpowering was this sensation that I doubt if even an alarm of fire in the hotel would have roused me.

In due time, the landlord appeared and looked at me. "Oh!" (he said in effect) "I guess it's the usual thing. We get plenty like that up here. Whisky's the thing for him." (That was the species of physic he dealt in.) So they gave me a certain number of spoonfuls of whisky, and awaited the results. As far as I know, that was the first drop of whisky that had ever invaded the sanctity of my stomach. Rocky Mountain whisky, moreover, unless greatly belied, is a liquor which is "fearfully and wonderfully made." It is said to consist mainly of benzoline and cayenne pepper. The throats of the miners have become so hardened by the constant passage of all sorts of fiery liquors that any ordinary drink produces no sensation in going down. Hence, as they say, or as somebody says for them, nothing is any good to them which does not convey the impression that they are swallowing a circular saw, or pulling a wild cat up the throat by his tail.

It was not long before the whisky began to produce an effect. My few remaining wits began to forsake me. At last, only one clear conception was left to me, and I had reason to regret that that did not go too. The one thing I knew was that my senses had fled, and I had not wit enough left to reflect that they had only been driven away temporarily by the action of the whisky. My imagination, strangely enough, was active. "Here I am," I thought—if I could be said to think at all—"in the heart of the Rocky Mountains, 5,000 miles from home and 10,000 feet above the sea, and my senses are gradually leaving me!" This sort of purgatory—I fervently hope there is no worse sort—lasted nearly two hours. I tried to talk, but the words would not stand in line; and if my friend had happened to take a shorthand note of my remarks, I might have been able to illustrate this narrative with some amazing, and possibly amusing, specimens of incoherency.

But the effects even of Rocky Mountain whisky pass off in time, and in the course of about two hours, which had been an eternity to me, my ideas began gradually to clear. The very first thought that passed through my brain was this:—"How foolish I have been to put myself in such a stew! It was all the effect of the whisky, of course!" And that thought transported me instantly from purgatory to paradise. I recovered rapidly, and it soon became clear that the whisky had, in its rough, merciless way, done something to rouse me. I thought it advisable, however, to see a doctor, and my friend fetched one. He repeated pretty much what the landlord had said, barring the prescription of whisky, wrote out a prescription of his own, assured us there was no danger, held out his hand for six dollars, and walked away. My friend carried the prescription to a chemist, paid more dollars, and returned with the "stuff." (Leadville is as expensive a place to be ill in as to do anything else in.) By the evening, I had sufficiently recovered to walk, with my friend's aid, to the hotel omnibus, and thus to reach the 7.30 train for Denver. I got the sleeping-car porter to "fix me up" soon after the train started; and so, half sleeping and half waking, but resting all the time, I rode all night long up and down the tremendous inclines already described—down to Buena Vista, and up to Hill Top, and down to Platte River, and across the South Park, and over Kenosha Summit, and down the Platte Canon, to

Denver. There I landed about 8 a.m., 5,000 feet below Leadville, still somewhat shaky, but capable of walking up from the depot into the city and eating a breakfast.

My illness had appeared very alarming to my friend and me, who were strangers to that kind of thing; but the Leadville and Denver people made light of it, and I suppose I was in no real danger. I am told that the dangerous cases are those in which the ears and nose bleed persistently, and there was no sign of hemorrhage in my case. Still, it is well for all those who know they are in any way affected by rarefied air to take all necessary precautions when ascending to great heights, and especially to secure the presence of a companion in all such excursions. Ugly as my experiences at Leadville were, they would have been vastly more painful and alarming, but for the fact that I had a faithful and devoted friend at my side.

Knowing that I had numerous high passes to cross westward of Denver, I called on a homeopathic physician before leaving the city and asked his advice as to the wisdom of going to great heights again. He heard my story, examined me, and assured me there was nothing to fear if I avoided exertion at great altitudes. He gave me a powerful tincture of something or other, telling me to take a few drops whenever I was at a great height and felt anything like drowsiness. I acted on his advice, and suffered no further inconvenience, even though I reached on one occasion a greater height even than Leadville.

I have often wondered whether every person who gets—well, gets inebriated, let us say—passes through what I passed through at Leadville. If so, I pity that class of people more deeply than I ever could have done but for that experience; and why a man who has been in purgatory once should voluntarily get himself in again, passes my comprehension. But perhaps my experience was exceptional. I have done my best to satisfy myself on this point; but singularly enough, I cannot find a single one of my whisky-drinking friends who can throw any light on the subject. None of them seem to have the slightest idea how a man feels when he is—well, let us again say, inebriated. This is a curious fact.

THE DENVER AND RIO GRANDE RAILWAY.

No notice of Colorado could be regarded as even approximately complete which failed to give some account of the remarkable system of mountain railways known by the above name. The narrow-gauge mountain lines already described form part of the Union Pacific Company's system; but, wonderful as they are, they constitute only a small portion of a great whole, just as a "light" line among the Welsh hills might be attached to the North Western or the Great Western system. The main lines of the Union Pacific are on the standard English gauge (4ft. 8½in.). But its mountain lines are, as already described, on the 3ft. gauge. The latter, therefore, necessarily constitute a complete system in themselves, with their own rolling stock, although they belong to and are worked by the great Company already mentioned.

But the Denver and Rio Grande is a narrow-gauge mountain line, and nothing else. Its rails, like those of the other mountain lines, are only three feet apart, and its experience has proved that that very narrow gauge is well adapted to the difficult country which it serves.

The history of the Denver and Rio Grande is a perfect romance of enterprise and genius. It is the story of one

perpetual war with gigantic natural obstacles, qualified occasionally by severe contests with powerful competitors and serious struggles against financial difficulties. It is impossible to traverse these wonderful Colorado railways, and to realise at what prodigious cost the mountains have been pierced and scaled at a score of different points, without almost involuntarily asking the question: "Where does all the money come from?" Scores of millions of dollars have been spent on these lines, and it appears impossible that a scattered mining population, great as its prosperity may be, can ever provide traffic enough to give any adequate return on the outlay.

I was told that a large part of the capital in the Denver and Rio Grande came from Boston and from this country. As for Boston, its accumulated wealth must be well-nigh beyond calculation if one is to believe all one hears in moving about the States. Ask where you will whence comes the money for any great public work you see in course of execution, and the answer usually is: "From Boston capitalists." Whenever Boston is not specially mentioned, "the East" is referred to in general terms as the source of the golden stream; and "the East" always includes the great New England capital. The investors in the Denver and Rio Grande have hitherto had to content themselves with a poorer return than their enterprise and the great service they have rendered to Colorado entitle them to. They have suffered immensely of late from the great depreciation which has taken place in the value of all American securities—a calamity which immediately succeeded the completion on the part of the Company of a great and exhausting effort. That effort was the extension of the line to Salt Lake City and Ogden—an addition of nearly 500 miles to its length at a single stroke. But, like most other American lines, the Rio Grande is providing for the future; and nobody who is familiar with its gallant efforts to strike the word "Impossible" out of the dictionary can help cherishing the hope that the future will provide an ample reward for all its enterprise, outlay, and skill.

The original plan of this railway consisted of a main line running straight south from Denver, and therefore parallel with the main range of the Rocky Mountains, as far as the frontier of New Mexico, with a series of branches running off to the west, penetrating the mountains, and reaching all the principal mining camps in the State. The main line was begun in 1870, as soon as Denver was connected with the Missouri and the East by the first of the great railways across the plains. But the main line north and south is barely 200 miles in length, and now forms a small part of the whole system. Its engineering features are, moreover, by no means remarkable, for this reason (already mentioned, that it runs parallel with the mountains, and does not penetrate them. The view which a ride on the main line affords is, however, superb throughout its whole length. The train is just far enough from the mountains to allow of the main range being seen, and the result is that the traveller has presented to him for hours a panorama similar to that which is seen from Denver. To the east stretches the interminable plain—a vast, brown ocean of short prairie grass. To the west, at distances ever varying, the mighty barrier of the Rockies shuts in the view. You look ahead for a hundred miles and backward an equal distance, but in neither direction is there any break in that noble sky-line. In the course of the journey down to Pueblo, a dozen famous peaks pass in succession before the eye, each with some peculiarity

of outline and colour which marks it off from its sister heights.

It was when the Rio Grande began to push its branches up into the mountains that its real struggles began. The first branch after leaving Denver is one of only five miles, from Colorado Springs to Manitou. Both these places are great health resorts, at which invalids congregate from all parts of the States. They possess some famous mineral springs, and the invalids, while drinking the waters, have the benefit of an atmosphere which is declared to be unsurpassed in the world in its special adaptation to lung diseases. Manitou, moreover, is close to the foot of Pike's Peak, one of the highest, but at the same time one of the most easily accessible, of all the Colorado mountains. There is a mule path all the way to the top, and anybody who can navigate a mule and breathe a very rarefied atmosphere may reach a height of 14,147 feet without any serious effort. At the foot of Pike's Peak and close to Manitou there is a remarkable place called the Garden of the Gods. There is not much of the garden about it; and if the gods actually frequent the place, their tastes must certainly be rather odd. The Geologists' Paradise would be a more appropriate name; for the principal features of the "Garden" are a large number of wonderfully fantastic, monument-like masses of rock, of a kind which is very characteristic of the Rocky Mountain regions. Most of these masses are usually tall pillars of rather soft material, crowned with a mass of much harder rock. The history of these weird objects is obvious enough. The whole surface of the "Garden" has been gradually lowered, by atmospheric and aqueous erosion, except at certain points where boulders of a harder nature than the actual soil of the place happened to lie. These boulders protected from the ravages of rain and frost the small surfaces they happened to cover; and as the general level of the country was gradually lowered, the pillars, with their harder capitals, were left standing up, gaunt and naked. The pillars did not spring out of the plain; the plain dropped away from the pillars. In many cases, the rocky capitals overhang the pillars they protect in such a way as to make them look like gigantic mushrooms. The lateral erosion, though less destructive than the vertical, ultimately eats through the pillars, and then down come the rocky capitals—only to take fresh patches of the softer soil under their patronage and protection. The scenery of these so-called "monument" parks and gardens (of which there are two or three others in the neighbourhood) is, it must be admitted, very remarkable. The bright hues, moreover, of the various strata exposed in the pillars sometimes add a rather startling feature to the scene. But the sight is weird and grotesque rather than beautiful.

At Pueblo, 120 miles south of Denver, the principal branch diverges from the main line—if, indeed, that can be called a branch which is now three or four times as long as the trunk. For it is this branch which has recently been extended right away through Colorado and Utah to Ogden, 36 miles beyond Salt Lake City, and 650 miles from Pueblo. But from this branch numerous other branches diverge, the most important being one to Leadville. This was, by the way, the first railway which reached that exalted region.

At Cuchara, 50 miles south of Pueblo, another long branch diverges to the west. This line, by means of windings innumerable and engineering of the most extraordinary kind, reaches Silverton, the centre of the rich San Juan mining district, 495 miles from Den-

ver. This branch, also, has secondary branches. One of these taps a great coalfield at El Moro; another reaches southward to within a short drive of Santa Fé, the capital of New Mexico; while a third runs up the valley of the Rio Grande to a point called Wagon Wheel Gap.

I travelled over more than three-fourths of the whole of the Rio Grande system, and I will endeavour to supply from actual observation some account of its most striking features. These journeys, I may add, were taken on my return from California; but as they are naturally connected with the subject of Colorado railways, they can be most conveniently dealt with here.

We went to California by the Union Pacific and the Central Pacific Railways. These constitute one continuous line of 1,900 miles, extending from Omaha to San Francisco. Their point of junction is at Ogden, 1,034 miles from Omaha. Ogden is for other reasons an important railway centre. It is the junction at which passengers change for the Utah road, which connects Ogden with Salt Lake City, 300 miles to the south. An important line also diverges to the north, through Idaho and Montana, finally joining the Northern Pacific Railroad. Besides these four lines, diverging north, south, east, and west respectively, the Denver and Rio Grande has, as before stated, extended its line to Ogden, *via* Salt Lake City; and, in order to vary our route, we returned from Ogden eastward by this new line, instead of traversing the Union Pacific a second time. Those who have followed me thus far will understand that passengers from the East to California have now a choice of routes as far as Ogden. They can go either by the old line of the Union Pacific from Omaha, or by the Atchafalpa, Topeka, and Santa Fé to Pueblo, and thence by the Denver and Rio Grande. Getting to Ogden, whether by the one route or the other, the traveller to California has no option but to proceed over the remaining 880 miles of his journey by the Central Pacific.

THE SALT LAKE AND OGDEN SECTION.

As I shall have to deal with the Mormon capital at some length further on, I need only say here that the Rio Grande train passes that city about an hour and-a-half after leaving Ogden. The line then follows the valley of the River Jordan for some distance and skirts Utah Lake (not the Great Salt Lake, but a large body of fresh water, which is discharged into Great Salt Lake by means of the Jordan). Until the line finally leaves the valley which embosoms this lake, thriving Mormon settlements continue to be passed at intervals. The principal of these are Provo and Springville. The lake once left behind, the line begins to ascend steadily through the Spanish Fork Canon towards Soldier Summit, a pass which would be regarded as a high one in England, but which is an insignificant affair beside those which have to be surmounted further on. Soldier Summit is the point at which the line crosses the crest of the Wahsatch Mountains, a lofty and rugged range which forms an imposing background to Salt Lake City as viewed from the west.

A few days before we traversed the line, it had been most unmercifully knocked about by a flood on the eastern side of Soldier Summit. (The American word for "flood," by-the-by, is "washout.") The newspapers head their descriptions of such a calamity with the words, "Great Washout." For eight or nine miles, every bridge had been destroyed, and all traffic was suspended for eleven days. The resources of the

Company were strained to the utmost to restore the communication in the shortest possible time. The bridges had not been rebuilt permanently when we traversed the line, and so very flimsy did the temporary erections appear that we were glad to find the driver crossing one after another at a snail's pace. Even then, they quivered perceptibly beneath the weight of the narrow-gauge train. Fortunately, we got safely through the region devastated by the "wash-out" before night fell; otherwise I confess I should have felt somewhat nervous about going to bed.

We had had a previous opportunity of judging of the effects of a heavy rainfall in that particular region, for before we reached Soldier Summit a heavy storm broke over the line, and the water rushed down on both sides of us in furious torrents, and in channels which it had apparently made for itself for that particular occasion. For the soil of that region is particularly soft and yielding, and the remarkable effects of weather action are visible on every hand. Up to the time of which I speak, the railway engineers had done little or nothing to protect the line from floods. By this time, their experience has no doubt taught them where their weakest points are, and they will ultimately be able to render the line secure against all ordinary "washouts."

It was in Castle Canon and Price River Canon that the "washout" had caused so much mischief to the line. These are traversed by a stream which flows down into Green River, and the railway follows its course throughout almost its whole length. These canons are not among the most imposing of their kind. At one or two points, notably at Castle Gate, the cliffs are particularly bold and picturesque, and approach within a short distance of each other, but they are more generally so far apart as to rob the canon of the character of a gorge. Being apparently composed of very soft material, they are almost everywhere weather-worn to an extraordinary extent. Their various strata being, however, of varying degrees of hardness, or rather of softness, the rate of erosion varies greatly, and the consequence is that the cliffs assume the most fantastic shapes. A lively imagination discovers in their weather-beaten crests almost any shape it chooses to look for, and even the most unimaginative cannot fail to find mile upon mile of ruined castle. The colours of the various strata are, moreover, varied and brilliant. Vegetation is, however, very sparse, except in the immediate neighbourhood of the stream. The wind-swept, weather-beaten soil is generally as bare as Sahara itself.

Before we reached Green River, we stopped for supper, and soon afterwards we got ourselves put to bed. It is a case of close quarters even in a broad-gauge "sleeper" which contains its full complement of passengers. In a narrow-gauge sleeper, the amount of elbow-room is still less, especially in the central passage, where it is difficult for two persons to pass each other when all the berths are made up. Some passengers, moreover, have an ugly habit of leaving valises, luncheon baskets, and other small baggage in the passage, so that, at the best of times, the navigation is difficult, especially after the lights have been turned down. Some care is necessary to avoid tripping over something or up against somebody, and thus stumbling half into some other gentleman's (or lady's) berth, the berths being only separated from the passage by a pair of damask curtains each. The crowding in our sleeper on the night in question was a good deal aggravated by

the presence of a rough Kansas farmer, his wife, and four young children, the whole six having only a single section between them. During the day, one or two of the children occupied parts of other sections on sufferance, but when bed-time came, all the six had somehow to be condensed into their own section, consisting of two berths (one upper and one lower), next to mine. The thing was done somehow, but the younger children were crying in half-suffocated tones during the greater part of the night.

I had another interesting person for a bed-fellow. When the young man who had the ticket for the berth over mine began to divest himself of his outer clothes, I saw that he took a bright metal something from his pocket and deposited it carefully under his pillow. I did not get a full view of the article, but instinct told me it was a revolver. I asked the owner why he carried "that thing" about with him, and he told me he was one of the Railway Company's officials, that he very often found himself in queer places and still queerer company, and that he took care never to be without a loaded revolver within reach. As we were just entering on a night run through the very wild country which lies between the Green River and the Grand River (the two streams which combine to form the Colorado), I did not particularly object to have an armed official immediately above me. His revolver, however, was not needed, and in the morning it was duly returned to his pocket.

That much-condensed family in the next berth prevented my getting much sleep, and I rose with the sun and walked out upon the platform of the car. The scene was a grand one. We were surrounded by lofty ranges of mountains on every side. The sun was already gilding the topmost peaks, but the valleys were still in shade. Into one deep valley, which the night mists still half concealed from view, our train was rapidly making its way, down a tremendous gradient, and round and round the usual interminable series of curves. We were coming down, for the second time, into the valley of the Gunnison River, and we knew that breakfast and the Black Canon of the Gunnison lay immediately before us. We partook of the former at a little station called Cimarron. That business having been disposed of, the train started again, having at its tail an open observation car, into and out of which the passengers could walk at their leisure.

The train was hardly clear of the station before the engine had entered the portals of a gloomy gorge, of greater depth and more awful grandeur than any we had previously traversed. This was the Black Canon, through which the Gunnison, raging angrily, and dashing itself into spray against the gigantic boulders which obstruct its bed, finds its way down towards the distant Pacific. Working patiently through incalculable periods the river has thus furrowed out a channel for itself athwart the mountains, and man, in the persons of the Denver and Rio Grande Railway Company, has "entered into its labours." But for this gorge, the engineers must have either burrowed under the mountains or scaled their summits.

Some travellers hold that the Black Canon of the Gunnison is, on the whole, the grandest gorge which the engineers have, so far, turned into a railway cutting. I say "so far" because a vastly longer, deeper, and more wonderful chasm is still waiting to be threaded by the iron road. I refer to the Canon of the Colorado River itself, which, under various names, constitutes a gorge 300 miles in length, and ranging in depth up to 6,200 feet. All the other canons of the Rocky Moun-

tains pale before the stupendous dimensions and unspeakable grandeur of this mighty chasm. Nobody, however, who has witnessed the triumphs which the engineers have already won among these mountains can doubt for a moment that the Canon of the Colorado will be ultimately conquered and turned into a busy highway. At present this canon is difficult of access. I did not get within 50 miles of it.

THE MARSHALL PASS.

Once clear of the Black Canon, the train traverses a more open country for a considerable distance, passing the town of Gunnison and a good deal of meadow land, skirting the Tomichi River. The line follows the course of this stream pretty closely for many miles, rising gradually at every step. The traveller who looks ahead up the valley may well be excused if he fancies that the train will be presently brought to a dead standstill against an insurmountable obstacle, for he sees that it is making straight for a great mountain range which effectually shuts in the head of the valley like a wall. That range is no other and no less than the main ridge of the Rockies—the Continental Divide itself, and the train, with its living freight, has to scale the summit. Presently the gradient begins to increase in steepness, and the locomotives (there are now two) are panting like over-driven horses. But they are well up to their work. Their progress is slow, as a matter of course, but they show no signs of being actually over-tasked. It is well, moreover, that the pace is a leisurely one, as ample time is thus allowed for the study of the remarkable engineering of the line and the enjoyment of the ever-widening, ever-changing landscape. Mile after mile, the train is lifted bodily at the rate of nearly 200 feet per mile, and at every mile the range of vision extends, and a new and more distant horizon dawns upon the astonished vision.

I need hardly explain that all this progress skyward is only accomplished by means of turnings and windings and loops innumerable. You find, for instance, that the train is slowly labouring up along the right-hand side of a deep valley which, as a glance shows, ends abruptly at the foot of an almost perpendicular ridge two or three miles ahead. If you happen to know that there are no tunnels on the line, you see at once that all progress in that direction must soon come to an end, and the question arises—What then becomes of the line? If you have had a little experience of mountain railways, you know exactly where to look for it. With some little trouble, you presently pick out what appears to be a scratch on the steep slope of the mountain on the opposite side of the valley to your left. This faint line is, at the point immediately opposite, perhaps 500 feet above your level at the moment, and you can see that it rises rapidly but regularly until it disappears behind the brow of the mountain. That "scratch" is the line you are ascending. In a few minutes, your train reaches the head of the valley, sweeps round a sharp curve, and, almost exactly reversing its direction, begins to toil up the slope on the opposite side. You now look across to the left (and, of course, downward) upon the part of the line you were traversing a few minutes ago; but before long a sudden sweep round the brow of the mountain to the right carries you out of sight of the valley you have thus traversed on both sides, and introduces you to another long loop in the railway precisely similar to the last, only that it is very much higher.

And so you go up—up—up—8,000 feet—9,000 feet—10,000 feet—until, at last, the crest is reached at a

height of 10,760 feet. The last 17 miles of that tremendous pull against collar have occupied more than an hour and a-half; and if the locomotives were flesh-and-blood toilers, they would be fairly "pumped out."

If you were 10,760 feet above sea-level on the Alps or any other European mountain chain, you would be in a region of perpetual ice and snow, thousands of feet beyond the highest point attained by anything in the shape of a tree. But at the summit of Marshall Pass (and it is Marshall Pass I am trying to describe) not a particle of ice or snow was to be seen when I was there, beyond a few moderate patches on some of the higher mountains in the distance. As far as I could see, there was not enough snow to make a snow-ball within miles of the pass. And what surprised me even more than the absence of snow was the presence of timber. I cannot say that the trees were thick enough to be worthy the name of a forest, but there were a good many scattered about, and some were of very respectable dimensions. It was nearly noon when we halted at the summit. The sun was shining brightly, and the temperature in the cars was rather unpleasantly warm. It was, indeed, difficult to realise the fact that we were on the summit of the main range of the Rocky Mountains.

Remembering the advice of the Denver doctor to avoid all exertion when at great heights and to take a drop of his "stuff," I acted on it in both particulars. I sat still in the car, took the homeopathic dose, and suffered no inconvenience whatever. It is clear, however, that passengers are sometimes affected by the great altitude, for when we were at the top of the pass, the conductor walked through the cars to see if anyone needed his services. Several persons were sleeping, and in all such cases he stopped and listened to their breathing. He told me that he was himself sometimes affected with slight lassitude and drowsiness. A few days previously, he said, his train stopped at the summit for a few minutes, and a gentleman passenger was unwise enough to get out and take a sharp walk for a short distance. He was so exhausted by the effort that he had to be lifted into the car, and in spite of the application of restoratives (a stock of which is always carried) it was thought he would have died before the train reached the lower levels.

One is disposed to ask how men were procured to do all the hard work involved in the construction of a railway at such a height. I presume that the workpeople had to be carefully selected for the purpose, and the probability is that many who attempted to work at such heights were compelled to abandon the task. It may be, moreover, that men of robust constitution, especially in the region of the heart, become gradually acclimatised to these great altitudes. As I have before remarked, Marshall Pass is not the highest point attained by Colorado railways. Alpine Tunnel, a few miles from Marshall Pass, and Fremont Pass, near Leadville, are both over 11,500 feet. It is, therefore, clear that the railway companies have found large numbers of workmen with constitutions adapted to mountain work. That a good many broke down under it is likely enough; for many persons are unable even to live at Leadville, much less to exert themselves actively.

The view from the summit of Marshall Pass is magnificent in both directions, consisting, as it does, of an almost unbroken sea of lofty mountains. The view eastward, which breaks upon the vision the moment the crest is reached, is the more impressive of the two, the mountains in that direction being higher than those westward. Among the more prominent objects on the

eastern side are Mount Ouray, an isolated height forming a well-known landmark, and the long snow-capped range of the Sangre de Cristo, containing some of the highest peaks in the country. This range culminates and suddenly terminates many miles further south in the famous Sierra Blanca, the highest mountains in the Rockies. But that height is separated from the ridge traversed by Marshall Pass by the whole width of the great San Luis Park, parts of which are visible from the Pass.

The descent is, of course, very much like the ascent reversed. The windings and doublings resorted to by the engineers, to "make distance" in order to allow the tremendous perpendicular fall to be got over, are but a repetition of those already described. The first part of the descent is very remarkable. The line runs completely round a conical peak, a short distance below its summit, coming back to within a gunshot of the starting point; but in making this apparently meaningless circuit, it has contrived to "climb down" a perpendicular depth of, perhaps, 250 or 300 feet. (I quote these figures at random; possibly they ought to be much larger.) Crossing over the head of a deep valley by means of a trestle bridge, it turns to the left along the side of that valley, then to the right a long way up the side of another valley, and so on and on, falling many feet every minute, until it finds itself traversing the main valley, on a more moderate gradient, alongside a stream which flows into the Arkansas.

About two hours after crossing the pass, we stopped for dinner at a place called Salida, where the Leadville line diverges towards the north. Here we were fairly in the valley of the Arkansas River, and the course of that stream was pretty closely followed until we reached Pueblo.

THE GRAND CANON OF THE ARKANSAS.

About halfway between Salida and Pueblo, the course of both river and railway is crossed at right angles by a mountain ridge which rises in places to a height of 3,000 feet. The obstacle looks insuperable, but there is nothing insuperable to a Rocky Mountain stream or a Colorado engineer. The stream has done the usual thing. It has gnawed out for itself a narrow passage which, in its depth, its gloomy grandeur, and the perpendicular character of its walls, is unsurpassed by any canon which has hitherto been threaded by a railway. This chasm is, indeed, the crowning glory of the western section of the railway. But for it, the line must have been carried up an abrupt ascent of 3,000 feet and down a corresponding descent on the opposite side. The Arkansas River spared the engineers all this trouble. But it by no means follows that the construction of the line through the canon was attended with no difficulties. On the contrary, the obstacles were exceptionally serious and numerous. In the first place, the Denver and Rio Grande Company had to fight for the right to appropriate the canon. It was absolutely necessary to leave its maker and original tenant, the Arkansas River, in possession of part of the gorge. The permanent damming-back of such a strong and determined stream was beyond the power even of American engineers. But, after leaving the river the very smallest amount of accommodation it could possibly be made to do with, there was width enough left for only a single line of rails, and hardly that in some places. The question was, whose rails should that single line be? It occurred to two companies—the Rio Grande and another—about the same time that it

was desirable to push a line through the gorge, and a bitter contest ensued. I am not sure that physical force was not actually called into requisition. Anyhow, the gorge was occupied by an armed force, in the interests of one of the rival companies at least, while the question was being fought out in the law courts of the State. The prize ultimately fell to the Rio Grande Company, and they proceeded to utilize it.

I believe I am right in saying that no human foot had ever trodden the whole length of the canon before the engineers began their work. Where the torrent did not fill the whole space between the perpendicular cliffs, the gorge was encumbered by vast masses of granite which had fallen from the heights above. In order to lay out the line, the surveyors had to let their men down hundreds of feet by ropes, and a foothold was not always found even then. I am not sure that, at some later stages, mules were not lowered in the same way. Every yard of the line was laid upon a narrow shelf obtained either by blasting or by building in the very bed of the torrent. At one point, the opposing cliffs approached each other so closely, and contracted the bed of the torrent into such close quarters, that it was found impossible to obtain sufficient space for the line on either side. The engineers, therefore, resorted to the expedient of hanging the line longitudinally over the torrent by means of girders mortised on each side into the solid rock. The width of the gorge at this particular point is but little over 30 feet. This part is rightly named the Royal Gorge, and the whole canon is well deserving of its name, the Grand Canon of the Arkansas.

For years before the railway was built, it was customary for people to drive over the mountains from Canon City, and peer down into the Royal Gorge. One writer, in describing his first view from above, says :

"Cowards at heart, pale of face, and with painful breath, we slowly crawl on hands and knees to the ledge, and as the fated murderer feels the knotted noose fall down over his head, so we feel as our eyes extend beyond the rocks to catch one awful glimpse of the eternity of space. Few dare to look more than once, and one glance suffices for the comprehension of the meaning of the word 'depth' never before dreamed of and never afterwards forgotten. The gorge is 3,000 feet sheer depth, and the most precipitous and sublime in its proportions of any chasm on the continent. The opposite wall towers hundreds of feet above us, and if possible to imagine anything more terrifying than the position on this side, that upon the other would be were its brink safe to approach."

I cannot refrain from quoting from another description, by Grace Greenwood, who writes :—

"I was lost in silent joy when I came to look down in that Grand Canon, the greatest sight I have yet seen in Colorado. It is grander than the Yosemite, because of its colour, which is everywhere dark with rich porphyry tints. So awful was the chasm, so stupendous were the mountain steeps around it, so gloomy were the woods, so strange, and lonely, and savage and out of the world seemed the whole vast scene, that it recalled to me the passage in the 'Inferno' :—

'There is a place within the depths of hell

Called Malebolge, all rock, dark stained,

With hue ferruginous, e'en as the steep

That round it circling winds. Right in the midst

Of that abominable region yawns

A spacious gulf profound."

This great sight ought to draw thousands of tourists to Canon City. I am amazed that there is no more said

of it and written about it. To me it is infinitely more impressive than Niagara."

Another writer says :—

"On the benches, close by the track, are seen hundreds of specimens of the bush cactus, holding a place among plants similar to that of the porcupine among animals. A little back, the enclosing granite walls rise, height above height, in a succession of craggy ledges, split and shattered, seamed with fissures and broken with gorges. In these fissures and on the tops of the ledges, often with no apparent soil to sustain them, are gnarled and rugged cedars. Frequently through some narrow cleft in the top of a ledge one catches glimpses of a much higher ledge beyond, with cedars clinging to its loftiest crags. Thus far its appearance is similar to that of other canons, elsewhere in the state, that are far-famed for their scenery ; but as the railway penetrates deeper into the mountains, all other canons are forgotten in the overwhelming grandeur of the granite barriers that narrow toward the Royal Gorge. The canon is here a mere fissure, and the river, crowded between the walls, and broken into foam by the rocks that have fallen into its bed, occupies one side, while the railway track, ten or twelve feet above it, lies close against the opposite wall, save where for a few rods the walls recede a little, enabling the eye to follow their surface to the topmost crags, 3,000 feet above. The rocks are many-hued : bright red, green, grayish white, and brown ; here stained with dripping water, and there overgrown with moss. Imprisoned in this narrow space, so crooked that the walls seem to close behind and before, the traveller who first beholds the scene from the platform of a swift passing car is bewildered with the kaleidoscopic changes. Here a smooth surface of granite, perpendicular for over a thousand feet ; there a point so splintered and wrecked that it seems about to fall ; reaching so far upward that the imagination stands appalled and struggles in vain to realise the awful height. Now the train is under the face of a cliff that has been cut into to make a roadbed, chipped off for several hundred feet above by workmen who drilled into the granite while suspended in the air by ropes let down from the top, and now it sweeps past the mouth of a gorge that runs up toward the summit, opening frightful vistas of shelving cliffs and loosened crags and doubtfully balanced boulders, that chill the blood with an 'if.' Suddenly the walls shut together till the river flows through a cleft only 30 feet wide, its granite sides rising over 3,000 feet on either hand, and the train runs upon a bridge built lengthwise with the stream for ten rods, and suspended from steel rafters mortised into the rocks overhead. In this culminating grandeur of the Royal Gorge the traveller instinctively holds his breath, and the most garrulous are awed into reverent silence, as in the immediate presence of the omnipotent power that rent the mountains asunder. Words of description are weak and comparisons are futile to express the incomparable. The whole length of the Grand Canon is about eight miles, and the deepest portion, known as the Royal Gorge, may be said to extend half that distance. The tourist who can spare the time will find himself richly repaid for the labour of walking through it leisurely from end to end, enjoying its grandeur and studying its manifold wonders ; and if he would experience a sensation the most thrilling of his life, let him ride around to the summit, and look down upon a passing train, so far, far below that it is dwarfed by distance to the dimensions of a child's toy. Haply he will meet in

the town or along the railway some person who can picture to him the manner in which the road was built; how, at some of the construction camps, men and tools, and mules and carts, were let down over the precipices by ropes, and men and animals received their food, like Elijah, from above, till they cut a track through the granite cliffs along the river; how the surveyors first picked their way through the canon on the ice, where before only fishes and birds had been; how the rockmen hung suspended in the air, and drilled holes in the granite for blasts that sent tons of rock crashing into the stream with a noise louder than thunder; and hearing the wonderful tale he will find himself quoting the familiar adage 'Verily, truth is stranger than fiction.'

I need hardly add anything to this description. Suffice it to say that my companion and I had no time to ascend the mountain and look down into the gorge; but we traversed its whole length in an open observation car, and the impressions which I brought away with me of the awful grandeur of the scene will, I am sure, last as long as life.

We reached Pueblo early in the evening. There I found my Denver friend awaiting me, prepared to accompany me on a journey over the southern section of the line, where other wonders of nature and art awaited our inspection. My travelling companion had decided on making straight for St. Louis, and there I rejoined him two or three days later after the adventures which I will try to recount in the next chapter.

THE TOLTEC GORGE.

My Denver friend and I left Pueblo soon after midnight for a run of 220 miles over the southern and western section of the line, which we were assured presented even bolder engineering than any we had yet seen. The night was a warm one in the Arkansas valley, in which the city of Pueblo is situated; but for the first time I found a fire in the car. This did not surprise me, because I knew that in the early hours of the morning we should be crossing the mountains at Veta Pass. Until the sun rose and we approached that pass, there was nothing to do but to try to sleep. I tried, but my efforts were not very successful. There was no Pullman "sleeper" on the train, and we had to obtain what rest we could on the seats of the ordinary car, which the stove soon rendered uncomfortably hot. I was glad when the first signs of daylight appeared, and when the diminished speed of the train and the more laboured puffing of the engine indicated that we had begun the ascent towards the Veta Pass.

It is a mistake to see the Marshall Pass before the Veta. The proper course, in all such matters, is to go from the less to the greater, and to reach the culminating point last of all. But going from the Marshall to the Veta is going from the greater to the less, and I can quite understand that it may sometimes result in a little disappointment. But in one who has never been over a high railroad pass before, the Veta cannot fail to excite wonder and admiration. The line reaches a height of 9,339 feet, and when near the summit it makes a bold sweep round the bare and precipitous shoulder of a mountain, or a narrow shelf formed by the blasting-away of the rock. This is the most interesting part of the pass, and we reached it just as the sun rose and lighted up the wondrous and far-reaching landscape.

Beyond the pass the line gradually descends into a plain of vast extent, in the midst of which is situated Fort Garland, a stronghold which was originally built to overawe the turbulent Indian tribes who formerly

occupied the district. The fort is a very different sort of building from that which we in Europe associate with the name. There is nothing about it of the thick-walled fortress, with its huge guns peeping out from embrasures of massive masonry. There was, of course, no necessity for providing such defences as these against enemies who had no artillery. The "fort," therefore, consists merely of a group of low buildings, scattered over a considerable area, and protected at certain points by low, loopholed walls.

As the train sped, in a straight line, across the elevated plain, we saw what looked like an isolated white mountain of moderate height standing up sheer out of the plateau on our right. Somehow or other, we seemed unable to get away from that mountain. Mile after mile was traversed, and still its relative position was not appreciably changed. I very soon saw that this apparent fixity could have only one meaning. The mountain must be a very high one, and it must be much farther off than I had supposed. I turned to my map, and to my astonishment made the discovery that this mass was no other than Sierra Blanca, the highest of the Rocky Mountains, and the loftiest peak save one in the United States. Its height is 14,404 feet, or only about 1,300 feet less than that of Mont Blanc. It was difficult to realise these facts. The peak appeared to be about 2,000 feet above the plain, and a Briton of sporting proclivities, unaccustomed to see natural objects on a grand scale through a clear atmosphere, would have been prepared to stake his all on being able to walk to its foot in half-an-hour. The distance in a "bee line" was a dozen or fifteen miles; and even if the ascent of the mountain is practicable at all, it would probably take a trained mountaineer a long day to reach its summit from the nearest point of the railway. The perfect transparency of the atmosphere in these regions appears to abolish space, and those who are new to the country lose all power of estimating distance. An object looked at through such an atmosphere, across an unbroken plain, may be one mile or ten miles off; it may be a hill of the dimensions of a West of England tor, or it may be a second Mont Blanc. No stranger can be sure of anything about it, until he has (so to speak) taken the parallax of the object by travelling a few miles abreast of it. My little Alpine experience, added to that which I had already acquired in Colorado, had, I thought, put me effectually on my guard. But I confess that I was completely taken in by this huge mountain.

At Alamosa, about 24 miles beyond Fort Garland, we stopped for a much-needed breakfast. At this point, a branch line goes off westward towards Wagon Wheel Gap, and the main line makes a sharp turn southward, that direction being maintained until Antonito is reached. After passing this station, the line again assumes a westerly direction, and grows more and more interesting at every step. At first, there is nothing special to remark except that the level of the country is rising with a moderate and regular slope from the level of the plain which has been traversed for more than fifty miles. But moderate as the slope is, it is more than a locomotive can be reasonably asked to climb in a straight line. The usual interminable meanderings accordingly begin. The windings and turnings are, however, very different from those I have hitherto described. They do not run up and down long, deep valleys, and round the precipitous shoulders of bare mountains at giddy heights. They simply wander about on the grassy surface and among the scat-

tered pines of a hillside. The ride up this hillside for twenty miles is delightful. The position of the train changes every minute, so that a hundred different views are obtained of the great mountain ranges which lie beyond the plains. Part of this ascent is called the Whiplash, and a most appropriate name it is, for the loops formed by the lines are very much like what the lash of a whip might make if thrown carelessly on the ground. Doubling upon itself twice on the side of the smooth hill, the track passes close to the same spot three times, but, of course, on three different levels. About the centre of this "double-bow knot" of railway line stands a house occupied by the men who have the care of the permanent way; and it is remarked of these men that each train passes their house so often, that they have time to make the acquaintance of the passengers before it finally leaves them. This seemingly aimless winding, which continues for over 19 miles, of course lands the train at last at a height of many hundreds of feet above the plain.

But interesting and enjoyable as this ascent is, it is but an introduction to something which immeasurably surpasses it. For, rounding the point of a promontory-like hill, 23 miles from Antonio, the traveller suddenly looks down into the deep valley of Los Pinos Creek. But he has only a few brief glimpses of its surprising beauty when a precipitous ravine branches off to the north, and the track follows the brow of the hills in a tortuous detour of nearly four miles among the pines—expensive for the railway company, but delightful to the tourist. Going up this ravine its full length, making a long curve around its head, and coming back nearly to the starting point, the passenger finds himself on the crest of a mountain overlooking one of the most beautiful of all Rocky Mountain valleys, over 1,000 feet below. The scenery for the next nine miles is unequalled by that of any other railway in North America. The road follows the steep mountain side just below the summit, making a great convex bend for a distance of over four miles, and then dives into a tunnel in the granite cliffs amid the culminating grandeur of Toltec Gorge. For all this distance, at the giddy height of over 1,200 feet, the track follows the irregular contour of the mountains in a succession of short curves, cutting through projecting masses of rock, and running over high "fills," made necessary by deep and ragged gorges. Before the road was built, a mountain goat could scarcely have followed its present course. Along the way are scores of the monumental rocks for which Colorado is so famous, rising in fantastic columns nearly as high as the pines beside them. One projecting point is cut through by a well-timbered tunnel. Passing the most southern point of the bend, the first glimpse of Toltec Tunnel is obtained, at a distance of about six miles by the course of the road. It appears as a small black spot in the face of the cliff, at a point where it is cut in twain by a great chasm. From here onward the tunnel appears and disappears at intervals till it is reached. Soon after passing the timbered tunnel, a sharp curve takes the train into a cove among the hills, with monument-shaped rocks on one side, and fantastic castellated cliffs 500 or 600 feet on the other. This is known as Phantom Curve. It is indeed a wild spot, with the valley so deep below, the weird, red monumental rock around, and the tall, shelving cliffs above. A mile beyond Phantom Curve the railway crosses the head of a ravine on a high bridge of trestle work. From this point the track runs directly toward the valley, on a line almost at right angles with

it, to where it narrows into a mere fissure in the rocks at Toltec Gorge. The ledge along which it passes is really a great wall across the head of the valley or canon, commanding a full view of it for many miles. Here the beauty and the grandeur of the scenery are beyond description. All the features of the landscape are on a Titanic scale. The track over which the train has just passed can be seen circling the brow of the mountain for miles, a tiny, yellowish thread. Far beyond the distant heights that shut in the valley rises the round top of San Antonio Mountain, while across the valley the opposite mountains rise higher and higher in vast, receding, wooded slopes. Nor is colour wanting to complete the charm of the picture. The dark hue of the pines, the light green and white of the shivering aspen, and the red and gray that alternate in the cliffs, add their subtle charms to the sublime panorama. When the train approaches the end of the wall, the passengers look almost straight down to where the stream emerges in foaming cascades from the jaws of Toltec Gorge. The pebble you toss from your hand drops far below, and you hear it strike again and again hundreds added to hundreds of feet distant, and yet silence does not signify that it has reached the bottom. It is simply out of hearing! Double the distance again, so far that the strongest voice can scarcely make itself heard, and when that terrible gulf is passed you might still look downward upon the tallest steeple in America; for the railway track at the brink of the chasm of Toltec Gorge is over 1,100 feet above Los Pinos Creek. But in a flash, in the twinkling of an eye, the scene is changed. One parting glance at the far-stretching valley and its mountain barriers, one shuddering, giddy look far down the precipice among the jagged rocks, and then all is hid from view in the darkness of the tunnel. For 600 feet the way is cut through solid granite. The train emerges upon the other side of the wall on the brink of a precipice, looking directly down into the gorge, across which the opposing cliffs rise abruptly over 2,100 feet. At the most critical point, where the downward view takes in the deepest depths of the gorge, lined with crags and splintered rocks, and boulders as large as churches, fallen from the cliffs above, amid which the stream dashes downward in snow-white cataracts, the train runs upon a solid bridge of trestle-work, set in the rocks, as if it were a balcony from which to obtain the finest possible view of this most wonderful scene. Marvellous, sensational, and grand as is Toltec Gorge, the climax is not reached until the railway comes to the summit which separates the waters of the Pinos from those of the Chama. From Toltec Gorge to Osier, eight miles, the elevation of the track above the torrent below gradually lessens until the valley bottom is almost reached. From Osier for some miles westward the grade of the railway is greater than that of the valley, and soon carries the line up among the topmost turrets which crown the summits of the surrounding mesas. The country here is very broken and confused, and the road clings to, and winds around, these lofty crags like a huge serpent trying to reach the sky. Suddenly, as the traveller is rapt in wonder, and is very naturally thinking "What next, and why this fantastic piece of engineering?" the train glides out from among the pinnacles at the summit and commences a very rapid descent into the dense pine forests of the Tierra Amarilla, through which the tranquil Chama winds its way. After crossing the Chama, and still among the pines, the line passes imperceptibly from the drainage of the Atlantic to that of the Pacific—from the basin of the Chama to

that of the San Juan. The height here attained is almost exactly 10,000 feet.

There are many ticklish points in the forty miles or line last described—points at which blood that is accustomed to curdle is pretty sure to undergo that change. The most awful-looking spot, probably, is the point at which the line suddenly emerges from the Toltec Tunnel upon the short trestle bridge, built up upon a mere ledge of the almost perpendicular cliff. If the train ran off the line here, it would simply fall sheer down a thousand feet, into the torrent, which boils and eddies along at the bottom of the gorge. I was told that an empty car did go over at that point during the construction of the line; and I think I may add (though I was not told this) that the Company did not trouble about the pieces. The speed of the train at these specially awkward points is, however, so greatly reduced that accidents are rendered in the highest degree improbable. Still, nervous people cannot help asking themselves: "But if anything *should* happen?" We had only one female in our car on this part of the journey, and she, poor soul! was almost beside herself with fright. "Good Lord! good Lord!" she said, appealing to us, her fellow passengers, rather than to her Deity, "when *shall* we be over this awful bit of track?"

Between Toltec and Chama, we stopped for dinner at a station called Osier. So far as I could gather, Osier consisted of the one house in which the meal was served. This house comprised two rooms—the dining-room and a single bedroom. The only inmates of this house were a female and a splendid dog of vast size and strength. The female was a lady of middle-age, one of the finest and most intellectual-looking women I ever saw. Her two rooms were full of evidences of a refined taste. Our party was small—less than a dozen all told, and the lady waited on us all, having previously cooked the dinner with her own hands. A better or more tastefully-served meal I did not meet with at any "eating station" in the country. The lady told me that the dog was her only companion, and that under his protection she roamed at will in the forests and among the mountains. I have often wondered what strange fate had thus ordered that a lady who would clearly have been an ornament to the most cultivated circles should spend her life in a solitary cabin, with a dog for her sole companion, amid the most rugged and inaccessible of the mountains of New Mexico. Hereon, perhaps, hangs a romance!

We did not go farther than Chama, for a return train was due there just after we arrived. I would gladly have gone on to the terminus of the branch at Silverton, in the San Juan silver-mining country, for the engineering of the line in the Canon of Los Animas, a few miles short of that place, is one of the most wonderful things of its kind even in that region of mechanical marvels. But there are only two trains a day, and our journey would have been extended by at least 24 hours, if we had not turned back after a few minutes' stay at Chama. By the time we again reached Osier, the exting-house lady who constituted the entire visible population of that place had supper ready, and the train pulled up for half-an-hour to allow us to partake of it. I did not feel ready for another meal, and therefore did not alight from the car; but, fortunately, as the sequel will show, my companion got the lady of the house to make me up a good bundle of sandwiches.

This train had a sleeping car attached to it, and as soon as we left Osier, it being by that time quite dark, my companion and I turned into our berths. Before

we were asleep, we found ourselves rumbling over the trestle bridge on the verge of the awful gorge already described, and then thundering through the Toltec Tunnel. For the next hour or two, we could trace our course by the ever-varying speed of the train and the incessant and sudden reversals of the inclination of the car. The many sharp curves, the ups and downs, the ticklish points of the line, were all as clear to us as if we had been gazing out of the window in full daylight. Before we reached the plain in which Fort Garland stands, I was asleep (I had already spent four successive nights in the cars, and was fatigued), and, all unconscious, I was dragged up to the summit of the Veta Pass and gently let down into the broad valley of the Arkansas.

STOPPAGE! STARVATION!! THEFT!!!

About five o'clock, I was awake by the sudden stoppage of the train. I drew up the blind of my section and looked out, but nothing whatever was visible except a boundless prairie, upon whose brown surface the unclouded sun was just rising. No station could be seen either ahead of us or behind us, and there was no apparent reason for the stoppage. We lay some time longer, in the momentary expectation that the train would move on; but it did not move on. At last, when we were about due at Pueblo, and breakfast was about due in our respective interiors, my friend and I concluded that it was time to dress and institute inquiries. We accordingly did both, and at last extracted from the train men the information that, in consequence of a storm in the night, there had been a "wash-out" somewhere ahead. A bridge had been wholly or partially destroyed, and we were doomed to remain where we were until it was repaired. Fortunately, the temporary repair was soon effected, and we moved on slowly over the scene of the "wash-out" to the next station. We were congratulating ourselves that our troubles were now over, and that we should speedily put behind us the 30 odd miles that still separated us from breakfast, when the ugly fact oozed out that there was something more serious than a "wash-out" just ahead, and that we were under sentence of a further and indefinite term of imprisonment. What that "something" was it was for a long time impossible to learn. The reticence of an English railway official in view of an accident is frankness and communicativeness itself beside that of his American brother in similar circumstances. You can extract nothing from the latter except by a series of painful surgical operations. Drawing teeth is nothing to it. It took all the passengers in our train a full hour to obtain possession of the bare fact that a train coming towards us from Pueblo had run into a horse and got "ditched"—Americanese for "run off."

Here was a pretty fix for civilized people, accustomed to have their meals regularly in a Christian way! My thoughts, of course, turned at once to the bundle of sandwiches which the Osier lady had provided for me, and carefully and lovingly I fished the precious paper parcel out of my bag. There was no knowing where or when the next provender would be obtained, and it behooved us to be careful of every crumb of our tiny store. I took out half the sandwiches, divided that half with scrupulous exactness between my friend and myself, and carefully replaced what an American would call the "balance" of the food in my black leather hand-bag, which closed with a spring. A gentleman passenger and the gentlemanly agent of the sleeping-car company were

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sitting, breakfastless, in the opposite section, and I daresay they watched our operations with covetous and wolfish eyes, though I did not note the fact. Having disposed of our very modest meal, my friend and I alighted from the car to try the effect of a few more surgical operations on any railway men who happened to be visible, and it was probably half-an-hour before we returned to our seats. My first and natural thought was to see that the balance of the provender was all right. I took the bag from under the seat and opened it. Robbery! Murder! The place which had known that parcel of sandwiches knew it no more. That gentlemanly traveller and that gentlemanly sleeping-car agent were still sitting precisely where we left them. They saw me look into my bag, but they betrayed not the smallest interest in the proceeding. What, indeed, was it to them that I looked in my bag and betrayed some few signs of astonishment? that my friend and I gazed first at the bag and then, suspiciously, round the car? Nothing, of course! Those two "gentlemen" had, however, undoubtedly had our sandwiches, but there was not a particle of evidence to be obtained against them except by hanging them summarily, and immediately making a *post-mortem* examination. We were not prepared for these heroic measures, and possibly they were equally unprepared; so we simply said nothing, and came to the conclusion that we had not been very wise in forgetting that food is common property in time of famine.

But the great food quest, a soon became pressing again. There were two ladies among the passengers, one of them with a baby in her arms, and nobody but ourselves appeared to have made any preparation for eventualities. A number of the male travellers, including my friend and myself, again alighted from the car and set out on a foraging expedition. Luckily, we at once found a "section house"—the residence of a ganger or foreman on the line—which the wooden shed that served as a station had hitherto hidden from view. That house contained a dirty, slatternly woman, who spoke with the richest of Irish brogues, and who was presumably the "section man's" wife. What we might have done after starving for a day or two I cannot say; but, hungry as we all were, we were not yet in a condition to eat anything which that woman had touched, or even to enter her filthy cabin. But here, again, luck was on our side. She had, as it happened, a large store of food which she had never touched. How did we know that? Well, the said food was eggs; and we were satisfied, without putting her on her oath, that her fingers had never been inside their shells. So we bought up her stock of eggs and "went a-gipsying" on the open prairie behind her house. We made a fire, and boiled the eggs hard in empty meat-tins, of which, by the way, an inexhaustible supply is scattered all along both sides of the western railroads. The lady passengers were duly provided for, and we had a moderate store of cold, hard-boiled eggs left with which to face the unknown future.

Soon after our picnic had come to an end in this satisfactory manner, we were told to get "aboard," and our train began to crawl along towards the scene of the accident. We found, on arriving there, that the story about the horse was true. There, indeed, the poor creature lay—scattered in little pieces over the line and the sides of the embankment. He had realised the fate which George Stephenson predicted for any "coo" that might get in the way of his locomotive. The horse's head was the biggest piece of him left intact, and I shall never forget the appearance of the eyes which stared

out of that head. The horse had apparently just time to put on a look of blank amazement as the cow-catcher caught him, but not time enough to shut his eyes on the world he was quitting; and that look of astonishment was left stereotyped, as it were, in his countenance. But while the collision was awkward for the horse, it was almost equally bad for the little narrow-gauge engine. The accident happened on an embankment 15 or 16 feet high, and we found the engine lying almost upside down at the bottom of the bank. The tender, whose connection with the engine was unbroken, was lying at right angles to it, sloping up the bank, with its upper end overhanging the line. The body of the baggage car was on the rails, but its wheels were at the bottom of the embankment. The passenger cars had kept upright, and no passenger was hurt, but the rails were torn up in a remarkable fashion for 20 or 30 yards. The engine cabin was smashed and twisted; but, strange to say, the driver and fireman, though found buried in coal, sustained no other injuries than a few scratches. They were busy helping to right matters, as if what had happened was all in their day's work. A large gang of men, consisting largely of Mexicans, was engaged in clearing and re-laying the line; and this work was accomplished in a wonderfully short time. Still, it was nearly mid-day before our train was able to pass on. It was past one before we found ourselves face to face with our breakfast at Pueblo, and late in the evening before we reached my friend's house at Denver.

ON TO THE MORMON CAPITAL.

We were due to leave Denver for Salt Lake City on the evening of the day on which we returned to the former city from Leadville; but my adventures in the latter place had taken so much out of me that I did not feel very well prepared immediately for another 24 hours in a Pullman car. My companion, therefore, preceded me by a day in starting for the City of the Saints. I, having meantime pulled myself together a little, followed him on Saturday afternoon, and rejoined him at the Walker House, Salt Lake City, on Sunday evening.

With the exception of the last 37 miles, the whole journey from Denver to Salt Lake City is accomplished by means of the Union Pacific Railroad. A branch of 103 miles takes the traveller to Cheyenne Junction, on the main line, where he changes; and thence to Ogden, 516 miles, the run is direct. At Ogden, a change is made into the cars of the Utah Central Railroad, which, in a run of 37 miles, land the traveller in the Mormon capital.

The only place of interest between Denver and Cheyenne is the town of Greeley, which was founded in the midst of the vast Colorado plain by the late Horace Greeley, proprietor and editor of the *New York Tribune*. The community of Greeley is supposed to be a purely temperance one. No land within the township can be bought, except on the express condition that no intoxicating liquors shall ever be made or sold upon it. Other restrictions are, I believe, enforced with the object of promoting the moral and intellectual welfare of the place. Whether it is in all respects a Paradise is more than I can say, though I was given to understand that the community was, as a whole, orderly, moral, and thrifty. Seen from the railway, the place can hardly be said to present an attractive appearance. In this respect, it is not unlike other prairie towns; but then physical ugliness is, as we all know, sometimes associated with

intellectual and moral beauty, and this is possibly the case at Greeley.

Had I not already seen a good deal of the mountain railways of Colorado, the run from Cheyenne to Ogden would have been a most interesting one; but journeys up the Clear Creek Canon and the Platte Canon, and over Kenosha Summit and the South Park, are a bad preparation for the main line of the Union Pacific, remarkable and interesting as the western half of it really is. About 30 miles west of Cheyenne, the line crosses the Rocky Mountains, at a place called Sherman, at a height of 8,235 feet. As it was dark when I reached the summit, and as I had already been 2,000 feet higher at Leadville, the passing of the Divide excited no very keen interest. Indeed, I got the car attendant to "fix" me early in the evening, and when I rose next morning the train was rapidly descending into the valley of the Green River, nearly 300 miles further west. Between Green River (where we stopped to breakfast) and Ogden Junction, the line is carried through a number of canons, abounding in the monumental rocks and similar strange geological phenomena for which the whole Rocky Mountain region is famous. At times, the scenery is grand and savage, and at few points is it dull or monotonous enough to be in any sense wearying. The line is solid and well-laid, and the splendid Pullman cars are—in the daytime, if not at night—almost all that one could desire. Riding swiftly in this luxurious fashion through one savage gorge after another, one cannot avoid contrasting this almost perfect travelling with the weary, painful, and apparently endless journeys by which thousands of the early settlers in Utah, Nevada, and California reached their destinations. For scores of miles at a stretch the track along which they toiled hugs the railroad. There was, indeed, very often no choice in the matter. Both the wagon track and the railroad necessarily traversed the gorges which constitute the only passages through range after range of lofty hills. Sometimes the track is to the right of the line and sometimes to the left. Here it is on a higher level than the rails, there on a lower. Here the inevitable river flows between the two; yonder they are side by side on the same bank.

It was early in the evening of Sunday that I arrived at Ogden Junction, where I had some half-hour to wait for the departure of the branch train to Salt Lake City. Ogden Station is the most important for hundreds of miles, but it is a mean, rambling, one-storey, and not very savoury collection of wooden buildings. I went into the ticket-office, and there found two or three matters to interest me. A Chinaman was at the ticket window taking a dozen tickets to San Francisco, for himself and eleven other pig-tailed Celestials. He was counting out 240 dollars (£48) in fares. It is not every day that one sees such a sum handed to a booking-clerk in a lump, but the vast distances traversed by the American railways, of course, necessitate big fares. A single person booking through from New York to San Francisco pays down about £26 for his ticket. These Chinamen were travelling only one-fourth of the total width of the continent.

Sitting in the ticket-office, waiting for the train to the Mormon Zion, was a shabby-genteel man with a woman on each side of him, each carrying a baby and having other children clinging to her skirts. No great penetration was needed to enable one to take in the situation at a glance. That man was clearly a Mormon, too much

married by at least 50 per cent., and I pitied him sincerely. His face bore an expression of unutterable boredom and melancholy. He showed no signs of anger or ill-temper with his too-abundant wives and children; he simply looked sad and wearied. He spoke never a word. When it seemed good to him, he rose from his seat, without giving a hint as to his intentions, and slouched dejectedly along the platform. His wives, docile and obedient as spaniels, and looking as much bored as himself, rose silently and followed him in Indian file—in the fashion, that is, of primitive man; and the two sets of children, mixed, brought up the rear. A sadder or more depressing sight than that family procession I never saw. The party had no luggage, and my impression was that the husband had taken the two families to Ogden for a Sunday's outing—to spend, in short, a "happy day." If this was really the case, I can only say that they were taking their pleasure as sadly as any Britons. It may be, of course, that that unfortunate disciple of Joe Smith's had a few other wives and families at home, and that his deep depression was due to his anticipation of certain curtain lectures which awaited him at the hands, or rather on the tongues, of the girls he had left behind him while he was gallivanting with the two favoured spouses at Ogden.

Ogden is so well situated with regard to railways, which radiate to all four points of the compass, that it is becoming a place of great importance. The population is rapidly increasing, and the city is assuming the character of a great trading centre. For the honour of my profession, I trust that its press is not fairly represented by the one newspaper I happened to pick up there. The paper is called *The Commercial Index*. It consists not of advertisements, but it is not entirely without news and "editorial" matter. Here, for instance, is its first "leader" of the day on which I was at Ogden:—

"Kind reader, this is very warm weather to write. We want to write something funny, but as the sweat trickles down our back, the fun seems to go with it. We can write funny articles, but we can't in warm weather. We looked up a copy of Bill Nye's *Boomerang*, but Bill is like us; the starch is out of him, and there was no fun in his *Boomerang*. All we can do is to advise you to take this paper and lay it away carefully, and when you get to your journey's end, find some cool and shady nook, and there, with your little ones (if you have any) peruse the paper and enjoy yourself. The foregoing advice is intended for our readers in the warm climates, such as the United States, South America, Africa, Asia, etc. Our special advertising agent in search of the North Pole informs us that the weather is very pleasant up there, and that the Index is the most popular advertising medium in circulation. There are many things to annoy an editor of a large paper like the Index. We are just in receipt of a dispatch informing us that England has raised objections to the clause in the articles of agreement for the construction of the second Suez Canal which gives the Commercial Index Co. the exclusive right to circulate the Index on and along the canal. England proposes to consent, provided the Index Co. will allow the Crown to appoint an associate editor for the Suez edition of the Index. A special agent has been dispatched to adjust the matter, and we hope to announce in the next issue a complete settlement of the trouble. In the meantime, we shall continue to receive 'ads' for the Suez edition, Gladstone and the English Government to the contrary notwithstanding."

I was not very much surprised that the "editor" wrote about the weather, and found himself incapable of dealing with any other theme, for I encountered greater heat at Ogden and Salt Lake City than anywhere else. Polygamy appears, too, to favour

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the multiplication of a peculiarly ferocious black house fly, which goes for one's blood with a reckless disregard of its own safety. Flies are a great nuisance in summer in many parts of America, but these Mormon flies are an easy first for persistency and bloodthirstiness. The refreshment-room at Ogden Junction was furnished with a number of self-acting fans, like horizontal wind-mills, which were kept revolving by means of springs and clock-work. These contrivances, revolving in the centres of the tables, were intended to frighten the flies off the diners' heads; but my impression was that the troublesome brutes had discovered the secret of the machinery, and learnt to despise it as a harmless fraud. At Salt Lake City, I had to give up the attempt to write some letters in consequence of the cruel persistence with which these flies attacked the backs of my hands.

It was dark when the branch train reached the Mormon Zion, and I at once entered a street car, drawn by a pair of fine mules, and made for the principal hotel, the Walker House. There I found my travelling companion, and received from him an account of all I had lost through not being able to leave Denver with him, and of what he had lost through not being in Salt Lake City an hour or two sooner.

LYNCH LAW.

What my companion just missed was a couple of tragedies, which had stirred the Mormon community to its depths. On Saturday afternoon, the Chief Constable of the city was shot dead in the open street by a drunken ruffian whom he was about to arrest. Now, the Chief Constable was a man of note, highly respected, a good Mormon, a popular officer, and the faithful and beloved husband of five wives. Such an exemplary person had to be avenged, and the indignant and hot-blooded citizens had not patience to await the slow processes of the law. The wretched murderer was dragged out of the lock-up by a furious mob, kicked about like a football until he was a mass of blood and bruises, and then hanged from a beam in a shed behind the City Hall. It happened that, on that very same day, another man was similarly lynched at Park City, only a few miles off. In his case, some doubt was afterwards expressed as to whether he was really guilty of the offence for which he was hanged. But there was no room for doubt in the Salt Lake City case, as the murderer was taken red-handed. It must not be hastily inferred from the occurrence of these two lynchings on the same day that the Mormons are a lawless people. That is not the case ordinarily. I was told, indeed, that no such scene as the one described had occurred in or near Salt Lake City for many years. But there are districts in the Far West where such summary executions have long been the rule, and where the haste of the residents to vindicate the law has too often resulted in the hanging of the wrong man. The following story of one such "little mistake" is told in Nevada:—

Early in the fifties, on a still, hot summer's afternoon, a certain man, in a camp of the northern mines, which shall be nameless, having tracked his two donkeys and one horse a half-mile, and discovered that a man's track with spur marks followed them, came back to town and told "the boys," who loitered about a popular saloon, that in his opinion some Mexican had stolen the animals. Such news as this demanded, naturally, drinks all round.

"Do you know, gentlemen," said one who assumed leadership, "that just naturally to shoot these greasers aint the best way? Give 'em a fair jury trial, and rope 'em up with all the majesty of law. That's the cure."

Such words of moderation were well received, and they drank again to "Here's hoping we ketch that greaser."

As they loafed back to the verandah, a Mexican walked over the hill brow, jingling his spurs pleasantly in accord with a whistled waltz.

The advocate for the law said in an undertone, "That's the cure."

A rush, a struggle, and the Mexican, bound hand and foot, lay on his back in the bar-room. The camp turned out to a man.

Happily such cries as "*String him up!*" "*Burn the dogged lubricator!*" and other equally pleasant phrases fell unheeded upon his Spanish ear. A jury was quickly gathered in the street, and, despite refusals to serve, the crowd hurried them in behind the bar.

A brief statement of the case was made by the *ci-devant* advocate, and they showed the jury into a commodious poker-room where were seats grouped about neat green tables. The noise outside, in the bar-room, by-and-bye died away into complete silence, but from afar down the canon came confused sounds as of disorderly cheering. They came nearer, and again the light-hearted noise of human laughter mingled with the clinking glasses around the bar.

A low knock at the jury door, the look burst in, and a dozen smiling fellows asked the verdict. A foreman promptly answered, "*Not guilty.*"

With volleyed oaths, and ominous laying of hands on pistol hilts, the boys slammed the door with "*You'll have to do better than that.*"

In half-an-hour the advocate gently opened the door again.

"Your opinion, gentlemen?"

"Guilty."

"Correct, you can come out. We hung him an hour ago."

The jury took theirs next, and when, after a few minutes, the pleasant village returned to its former tranquillity, it was "*allowed*" at more than one saloon, that "Mexicans'll know enough to let white men's stock alone after this." One and another exchanged the belief that this sort of thing was more sensible than "*nipping 'em on sight.*"

When, before sunset, the bar-keeper concluded to sweep some dust out of his poker-room back-door, he felt a momentary surprise at finding the missing horse dozing under the shadow of an oak, and the two lost donkeys serenely masticating playing-cards, of which many bushels lay in a dirty pile. He was then reminded that the animals had been there all day.

SALT LAKE CITY.

Salt Lake City, the capital of the Territory of Utah and the headquarters of the Mormons, stands in a magnificent position in the midst of a fertile plain, near the western foot of the Wahsatch Mountains, and about 12 miles from the south-eastern corner of the Great Salt Lake. The site was selected with great care and judgment. No Gentile is bound to believe that it was pointed out to Brigham Young in a revelation from heaven, but it is clear that Brigham made good use of an excellent judgment when he chose the spot as a suitable place on which to found the Zion of his "Church."

Nobody who sees that smiling plain as it spreads itself to the view to-day, divided into well-watered and fertile fields, producing abundant crops of grain and fruit, can do full justice to the wisdom of Brigham Young's choice, unless he happens also to know what the country looked like when the Mormons first encamped on it, after their long and weary tramp across interminable prairies and savage mountain ranges. For the land was then a forbidding wilderness, not unlike the deserts which still encompass the Great Salt Lake on two of its sides and extend almost across the State of Nevada. A "prophetic" eye, or an "eye of faith," was really needed to see in that waste of alkali deposits and thinly-scattered sage-

brush the fertile Paradise of which the plain consists to-day. Whether Brigham had sufficient knowledge of chemistry and agriculture to be fully alive to the possibilities of the soil I do not know; but that he made an excellent choice for some reason or other nobody can doubt who has seen the city and its surroundings.

The agent which has worked such a wonderful transformation in the region is water. The soil, as I have already intimated, was saturated, in some places actually encrusted, with a white alkali deposit, which was inimical to all vegetation. This mineral deposit was undoubtedly due to the fact that the lake once covered the whole plain, and that, in shrinking to its present dimensions, it left behind a coating of the saline and alkaline matters with which its waters are charged to an extraordinary extent. Apart from these deposits, the soil was wonderfully rich, and the Mormons set to work to wash the salt and alkali out of the ground. They found an ample water supply in the Wahsatch Mountains. This water had hitherto flowed into the lake without benefiting the soil, but the settlers soon turned it to useful work. Diverting it into artificial canals, they made it flow, in clear, rapid streams of considerable bulk, through every street in their newly-planned city, and then by many channels across the plain between the city and the lake. The results have been truly marvellous. The salt and alkali have been completely washed out of the soil, and the desert has literally been made to "blossom as the rose." Whatever one may say or think about Mormonism and its peculiar code of ethics, it must be admitted that the Mormons have made great progress in the work of turning the desert of their choice into an earthly Paradise.

The Mormons tell us that the plan of the city was "given by inspiration." As to this, I can only hope that it is not a faithful model of any of the golden cities in which the idealized humanity is destined hereafter to dwell. Even the New Jerusalem would prove wearisome if laid out on this plan of a mighty chess-board, with never a curve (that "line of beauty") to break the awful monotony of its infinity of straight lines and right angles. But Brigham Young was nothing if not practical. He clearly thought the picturesque of little account, and he therefore marked out the city in such a way as to combine the greatest possible number of practical advantages, without the slightest regard for variety of appearance. Being a prophet, and, as such, foreseeing a mighty future for his city, he discounted its coming greatness pretty liberally. The area laid out is between two and three miles square. This is divided into 260 square blocks of 10 acres each; and the streets, which are all straight and cross each other at right angles, are 128 feet wide. Only a few of the streets are built close up. The majority are in a very rough condition, the roads being in a state of nature and half grown over with weeds. The traffic is not enough to keep the grass down over so immense a width. The sidewalks are not much better than the roadways, and at the crossing of the streets the pedestrian has often to stride or leap across the wide gutter in which the fertilizing current that has made the place what it is, is ever flowing. These streams are among the most attractive features of the city. They give an air of life and coolness to the streets, and they also maintain in rank luxuriance the avenues of beautiful shade trees which everywhere skirt the footways on both sides. The value and comfort of these avenues are past telling. The thermometer stood at 104° in the shade on the day on which I was in the

city. I walked about a good deal on that day, and was, of course, aware that it was hot; but I had no idea until next day, when the newspapers recorded the temperature, that the mercury had been up among the 100's. I had before felt, on one occasion at least, what appeared like a much higher temperature, but that was when sitting, under a mid-day sun in July, on the bare rock of Europa Point, Gibraltar.

The water which flows through the streets is, however, made to do something more than nourish the trees and gratify the eye. There are officials in each of the twenty wards into which the city is divided, whose duty it is to turn the water into the citizens' gardens by night, according to a set of regulations designed to secure to every man his fair share of the life-giving streams.

The present population of Salt Lake City is about 27,000. (I shall have occasion to refer further on to the proportion which the Gentile population bears to the Mormon element.) It is obvious that there is room for a much larger number of inhabitants on the large area I have described. If the streets were built up with tolerably high houses, room might easily be made for a population of 100,000, even although so large a part of the area is occupied by the unusually wide streets. At present, however, very few of the streets are thickly inhabited. The majority of them display numerous bare plots, orchards, and gardens, varied here and there by a house, usually of wood and only one storey in height. Everybody, except in a very few streets, has plenty of elbow-room. This is an advantage, but, as I have before explained when describing somewhat similar cities, the advantage is dearly bought. When a city possesses an enormous mileage of street in proportion to its population, the cost of many public works is so excessive that they have often to be dispensed with altogether. A wealthy community like that of Bournemouth or Torquay is able to bear (with some grumbling) the cost of sewers, gas, water, and lighting, vast as it is in consequence of the great length of roads; but a new and comparatively poor city on the confines of civilization cannot possibly afford such luxuries unless the inhabitants are content to pack themselves rather closely together. Salt Lake City, I was told, did not possess a single sewer, and its lighting was in many parts conspicuous by its absence. As for its roads and sidewalks, I have already said enough to indicate that they are no great burden on the rates. There is a tolerably complete system of street tramways. The rails are badly laid and maintained, as in so many other American cities; but the cars, which are drawn by pairs of fine mules, appear to afford the favourite means of locomotion.

My travelling companion, having arrived in the city on Saturday, was able to attend the Sunday service at the Tabernacle. The only part of the performance which had impressed him, so far as I could gather, was the singing, which, accompanied on one of the largest organs in America, he described as very fine. That so much good music should be wasted on the wretched doggerel of which many of the Mormon hymns consist, is, however, a pity.

As I did not arrive till Sunday evening, I was denied the "privilege" of attending this "service;" but I did the next best thing—I went with my friend and had a look at the Tabernacle on Monday. The building is inside a huge enclosure surrounded by a high wall. We entered by a gateway, inside of which stood a porter's lodge, and the gatekeeper immediately came forward to

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learn our business. On being told that we wanted to see the Tabernacle, he replied that we were free to do so, and at once accompanied us to one of the doors.

As we walked towards the Tabernacle, we passed the unfinished Mormon Temple, a vast building of granite, which has been many years in course of erection, and the finishing of which is likely to occupy many more. It is impossible to ascertain anything definite as to the uses to which this building is to be put when it is finished—if it ever is. All we were able to learn was, that it is not intended to supersede the existing Tabernacle for purposes of worship, but that the "secret rites of the Church" are to be performed there. About these rites there is as great an air of mystery as there is over the curious antics which accompany, or are said to accompany, the "making" of a Freemason. These secret rites of the Mormon Church are now performed in the Endowment House, a rather mean building which is also inside the Tabernacle enclosure. The "rites" in question must be of a specially sacred and important character to justify the erection of such a building as the Temple. The walls, of solid granite, are 9 or 10 feet thick, and are to be nearly 100 feet high. At each end there are to be three towers surmounted by spires, the loftiest of which is to be 225 feet in height. Over two millions of English pounds have already been spent on the work, and the Mormons boast that they intend to spend over six millions. If they are as good as their word, they will, I suppose, be able to boast of having the most costly church in the world; but if I may judge of it by the drawings I saw, our Old World cathedrals will have nothing to fear in a comparison with it as regards architectural beauty. The Temple was begun in 1853, but it must not be supposed that the work has been prosecuted ever since with uniform vigour, for the necessary funds, it appears, have flowed in somewhat irregularly. Unless the past rate of progress is considerably exceeded, the place cannot be finished in the nineteenth century. It is whispered by profane outsiders that Brigham Young, who was a statesman in his way, started the building in order to provide something on which to concentrate the thoughts and energies of his followers, and thus draw off their attention from questions which he did not want to see stirred. In short, he kept them out of mischief by providing them with an almost endless task—so say Gentile scoffers. But, whatever his intentions may have been, the work has been taken up seriously by his followers, and I see no reason why it should not be finished if—well, if Uncle Sam does not some day put his foot down upon the whole nest of unclean birds and crush out polygamy by main force. The Temple, although only half-built, is already too holy a place to be defiled by the foot of a Gentile. It is as jealously guarded against outsiders as a Moslem mosque against Christians; and a move which we made, as we passed, in the direction of the principal entrance, was instantly checked by our attendant.

The existing Tabernacle is probably the ugliest building in the world, and it is gratifying, so far, to learn that it was designed by no earthly architect. The plan was let down, in the form of a perfect model, out of Heaven, or it was revealed to Brigham Young in a dream—I really forget which; and as my readers pay their money, they may take their choice between these two modes of architectural revelation. Looked at from the outside, the Tabernacle appears precisely like an immense oval metal dish-cover, raised a little way above the ground upon a number of small square blocks. The

dish-cover is the roof; the square blocks (49 in number) are so many plain brick piers which support it. Between almost every pair of piers are wide doors, with shallow windows over. The oval interior is 250 feet long and 150 broad, and the immense concave roof has not a single support except upon the piers already mentioned. The vast span is not broken by a single pillar. The organ, and a large rostrum for the choir and the speakers, occupy one end, and round all the rest of the building runs a deep gallery of vast capacity. Both floor and gallery are filled with low, plain, wooden seats. The Mormons say the place will hold 13,000, or even 15,000, persons at a push; but the capacity of the place, like that of nearly all public buildings, is, I feel sure, greatly exaggerated. The truth, I believe, is that, allowing 18 inches for each person, there is sitting room for 6,000 or 7,000 persons; but as Mormon women are accustomed to take their numerous babies and young children to church, it is possible that there may sometimes be 9,000 or 10,000 "persons" present; but they are certainly not "statute adults."

The interior of the immense oval dome was, when I was there, profusely decorated with numerous festoons of artificial flowers in paper. These had a very tawdry appearance, but they were probably an improvement on the vast expanse of bare whitewash which would otherwise have been exposed. They were put up temporarily for some festivities in 1877, and were thought to add so decidedly to the beauty of the place that they were allowed to remain.

However sceptical the Gentile may be as to the celestial origin of the architecture of the Tabernacle, it is only fair to say that on two points Brigham Young was really inspired—by the soundest principles. We are told, much too often for our comfort, that there is not a public building in London which could be cleared of its audience, in case an alarm of fire were raised, in time to ensure the safety of the whole audience. In this respect, Brigham beat the London architects hollow. As I have already explained, almost half the circumference of the building consists of wide pairs of doors. These all open outwards; and when the meeting breaks up and the doors are thrown open, every person in the place walks straight out of his seat into the open air, without having to crawl at a snail's pace down a long and crowded aisle. The congregation thus emerges in numerous moderate groups from every part of the building at once. It is said that the place can be cleared in three minutes, and I believe it.

There is yet one other particular in which the Tabernacle surpasses all other buildings I have ever seen or heard of. It is a perfect St. Paul's Whispering Gallery on a much larger scale. A whisper uttered at one end is distinctly heard at the opposite end. So, indeed, is the fall of a pin. Our guide gave us a practical demonstration of this fact by dropping a pin into his hat at one end of the building, while we stood in the gallery at the other end, at least 200 feet distant.

THE GREAT SALT LAKE.

It is from this famous and rather mysterious lake that Salt Lake City takes its name. The city is about 12 miles from its south-east corner, but the place which may be called the Brighton of the Mormon capital is Lake Point, on the southern shore, about 20 miles from the city. Lake Point is reached by rail, the line running the greater part of the distance in a perfectly

straight line, over a perfectly level plain, which was clearly covered by the waters of the lake at no very distant period.

The lake is really a great one, and really salt, so that its name is appropriate. It is something like 75 miles long and 30 broad, and its surface is 4,200 feet above the ocean level. The water is very shallow, and there are six islands of various sizes. Several rivers flow into the lake, and as it has no outlet, it is obvious that the evaporation is at least equal to the bulk of the water flowing into it. As I have already intimated, there is reason to believe that the evaporation has in bygone ages exceeded the contributions poured in by the streams. It is quite clear that the lake was once much larger than it is now, and, of course, it then presented a larger surface to the sun and atmosphere, and the evaporation was necessarily greater, while the inflow from the rivers was probably about the same as at present. In course of time, the lake has no doubt shrunk in area until it has reached a point at which, on the average, the inflow and the evaporation are equal. In the spring of the year, it expands and overflows part of the low ground on its eastern side; but as summer advances, the increased evaporation and diminished inflow reduce it to its ordinary dimensions.

The saltiness of ordinary sea water conveys no idea of the intensely saline character of the Great Salt Lake. Nearly 22½ per cent. of its water consists of mineral matter in solution. The result is, that the specific gravity is very high, and it is impossible for the human body to sink in it. The bather can, indeed, float with his head, his arms to the elbow, and his legs up to the knee, above the surface. Floating is thus easy enough, but swimming is not so easy; the difficulty is to keep the legs under water when striking out. Bathing in such water has its drawbacks. One cannot well be drowned in it, but drowning is not the only method of dying. One may be strangled, and it is said that a bather who accidentally gets a good gulp of this very dense and curious solution of minerals into his stomach runs some little risk of shaking off his "mortal coil" in that painful fashion. Even a drop of the water in the eye causes intense pain. There is yet another drawback to a bath in the Great Salt Lake. Clear as the lake water is to all appearance, it is necessary to wash in fresh water after bathing, for a thick deposit of salt and other mineral substances adheres to the skin in a very uncomfortable fashion. The Great Salt Lake has been often compared with the Dead Sea in Palestine. The waters of both are very much alike in density, and they probably owe their large proportions of mineral constituents to similar causes. It is obvious that a salt lake whose area is in course of contraction through excessive evaporation must necessarily tend to become saltier. The water alone goes off in vapour, while the solid elements remain. Apart from the quality of its water, the Great Salt Lake has another point of resemblance to the Dead Sea. It has a River Jordan running into it. The Mormons are fond of regarding their city as the Zion of their so-called "Church," and they naturally christened the river which flows near it after the famous stream which flows through the Holy Land, within a short distance of the real and original Jerusalem.

In spite of the drawbacks I have mentioned, the Mormons regard a bath in the lake as a great luxury. They have turned Lake Point into a regular bathing station, running a sort of pier out into the lake, and erecting a large number of wooden dressing boxes, in which com-

plete bathing dresses for both sexes are provided. A bathing train runs to Lake Point every afternoon during the season, returning to the city after a suitable interval.

My friend and I went to the lake and back by this train. We had by that time become pretty well accustomed to the free-and-easy style in which the American railways wander about the cities on the level, but this particular train supplied a new illustration of free-and-easiness. It was actually drawn up in the middle of the wide, half-dusty, half grass-grown strip of common land called a "street." Intending travellers approached from both sides—from all sides, in fact, and clambered into the covered but open-sided cars in a delightfully promiscuous way. Some drove up in buggies and other vehicles, drew up alongside the train, and stepped off their own conveyances into the cars. If they happened to have no tickets, they could get them of the conductor after starting. When starting time came—or rather when it occurred to the officials that they might, perhaps, as well start—we moved off in a very deliberate fashion, passing along one dusty, dreary-looking avenue after another, until we at last emerged, without noticing how or at what exact point, into the open country. At first, our way lay through irrigated, unfenced fields; but as we receded from the city, we receded from cultivation also, and before we reached the corner of the lake and turned along the southern shore, we were in the primitive wilderness. Here, too, we left the plain behind us. The lake was on our right, and on our left rose a range of bare, savage mountains, which were the mere foot-hills of loftier ranges behind. When I say that this region is a wilderness, I do not mean that it is absolutely bare. As a matter of fact, it is thinly covered, as nearly all the barren regions further west are, with a plant known as "sage brush." It was on the shore of the Great Salt Lake that I first made a close acquaintance with this remarkable plant, but I afterwards traversed many hundreds of miles of deserts which produce literally nothing else. Sage brush is simply a dwarf shrub, a foot or two high, of a pale green colour, and emitting a strong and not very pleasant herby odour when crushed. It is the Chinaman of western vegetation. It lives and thrives where nothing else can. Neither soil (as we understand the term) nor moisture appears necessary to its existence. It stands up, juicy and vigorous, out of a soil which appears to consist entirely of hard gravel, and where not a drop of rain falls for months together. Hundreds of miles of sage brush at a stretch are, it must be admitted, a little monotonous and wearisome; but it is something to have the interminable deserts clothed even with this humble and apparently useless plant.

We did not bathe at Lake Point, but we found ample amusement in watching the Saints (and sinners) who did. Both sexes, in full bathing costume, bathed together, and the arrangement struck me as a very sensible one. The idea that there was any impropriety about it never entered my head, although I can quite believe that many a British matron, who sees nothing objectionable in the semi-nudity and promiscuous mixing of a modern ball-room, would have held up her hands at the sight in virtuous horror. We were standing on the pier watching the antics of the various groups of bathers, when a lady who was flopping about with her husband in water about waist-high, appeared suddenly to recognise my friend. With that frankness and freedom from conventionality which

characterise the Americans, she called out, "Oh! you should come in. It's real elegant!" (I have ventured to translate the last two words. What she really said was: "real allygant.") I naturally looked at my companion for an explanation of this incident; for, so far as it was possible to form any idea of the personality of a lady in a bathing dress, this particular Americanness was a stranger to me, and I wondered how he knew her. His explanation was perfectly satisfactory. On leaving me behind at Denver, he had travelled with her and her husband for many hours, and had formed something like confidential relations with them. They were a Cincinnati couple, out for a little holiday trip of a few thousand miles, and were "doing" the Mormon capital in regular course.

MORMONISM AND POLYGAMY.

That unfortunate illness of mine up at Leadville upset my plans in more ways than one. I had hoped, for instance, to have sufficient time in Salt Lake City to make some investigations on the spot into the delicate question of the "peculiar institution" of Mormonism. But owing to my loss of time at Denver, I had reluctantly to abandon this part of my scheme, and but for a lucky accident I should have had nothing whatever to say about polygamy. That lucky accident befel me in this wise. Soon after leaving Salt Lake City for San Francisco (of which journey I shall have more to say in a future chapter), I found that one of the persons berthed in my car was a young and intelligent merchant, carrying on business in the Mormon capital—a man who, from his virtual repudiation of Mormonism, his objections to polygamy, and the frankness with which he talked about his fellow-citizens, was an admirable subject for cross-examination. I was in the same car with this gentleman for two days and a night, and that was long enough to allow of the formation of a most intimate acquaintance. Before we reached the Golden City, I was on tolerably confidential terms with the citizen of the Mormon Zion, and I will try to give a brief summary of the information he imparted to me in a series of conversations extending over several hours.

It was not long before I discovered that Mr. C. (I must not give his name in full) was a Mormon only nominally. I told him of my discovery, and he admitted the soft impeachment.

"But," he said, "I owe a great deal to Mormonism—my position in life, if no great spiritual benefit. My father was a London carpenter, with a large family and a small income. We all knew what hard times meant. But while I was yet a little boy, my father was converted to Mormonism, and, as a family, we accepted his new creed. Mormonism opened up to us a prospect of an escape from a life of poverty and toil. With bright visions of an earthly Paradise beyond the Rocky Mountains, we gladly abandoned our English home and faced the perils of travel by sea and land. There was no Pacific Railroad in those days, and from the Missouri westward we toiled along for weeks over prairie and mountain, carrying our lives in our hands, for the attacks of Indians upon the moving bands of immigrants were incessant, and were sometimes marked by wholesale massacre. But at last we were rewarded for all the toils and dangers of the way. We looked down from the summit of the last range of mountains that had to be crossed upon the Zion of our hopes, and, as a family, we have all reason to be

thankful that my father's conversion brought us there. We are all doing well; whereas, if we had remained in London, we should probably have continued poor to the end of the chapter."

I suggested that he was taking a rather worldly view of things, and remarked that what I wanted particularly to learn something about was his own attitude with regard to Mormonism. He was perfectly frank with me.

"No," he said, "of course I don't believe in it. My eyes were very soon opened on that subject. But I am not equally outspoken when I am at home, for I tell you candidly that I don't feel enough zeal in the cause of any existing religion to impel me to run a crusade against the faith of my own family and friends, to say nothing of the general community of Utah. I am surrounded with Mormons and Mormonism. Salt Lake City contains about 25,000 inhabitants. Of that number only about 5,000 are Gentiles. The balance of 20,000 consists entirely of Mormons, real or nominal. 10,000 of these are in grim earnest, and would, I believe, fight to the death for their creed. The other 10,000 are more or less like myself—nominal Mormons, more or less sceptical, but declining to go against the dominant religion, and in many cases conforming outwardly to the demands of the Church."

"In what light, then, do the leading Mormons regard you?" I asked.

"Well, they know I am a sort of Gallio, for they are quite aware that I am not often at the Tabernacle, and not particularly prompt and regular in paying my tithings. But then I am not openly hostile, and they are obliged to tolerate my very obvious want of zeal."

At this point, something like his youthful zeal for the faith of Joe Smith appeared for a moment to return and reanimate him, for, adopting a somewhat more earnest tone, he continued—

"Not, mind you, but what I would as soon believe in Mormonism as in any other religion. There are elements in it which I dislike; but, on the other hand, there are some real pretty things about it."

"An application of the peculiar national expression 'real pretty' to a religious belief struck me as comical, and I asked him, laughing, what he meant by 'pretty' doctrines.

"Well," he said, "there are quite a few. Take, for instance, the doctrine of baptism for the dead. I am not now discussing whether it is true or false. What I say is that it is the kind of thing to attract benevolent, self-sacrificing persons. They are told that by undergoing baptism themselves they may give a lift to their friends who have passed into the invisible world; and it is a fact that this doctrine proves attractive to them."

"But," I said, "of course you do not regard polygamy as one of your pretty doctrines?"

"No," he replied, "I do not. I never believed in it. I have no wife myself, and I guess one is enough for any man."

Having thus well started him on this ticklish subject, I endeavoured to lead him on by asking him to give me his candid opinion as to how polygamy worked.

"Variously," he replied. "In some of the happiest families I know in the whole city there are two or more wives. I, being a bachelor, am myself boarding at the house of a friend who has three wives, and there is perfect harmony. At this time of the year, it is a very common thing for my friend, myself, and one, two, or all three of his wives, to take our rocking-chairs out on the stoop together in the evening, and to sit chatting

pleasantly by the hour, we males smoking and the women sewing or knitting."

"Are there any children?" I asked.

"Yes," he said; "all the wives have children."

"In what light do the children of one wife regard the other women?" I inquired.

"Oh, they get on all right together. The children of each wife are taught to call the other wives 'Auntie.'"

"But," I said, "nobody who knows anything of human nature—especially the female variety thereof—can believe that such domestic harmony as you have described is invariably the attendant of polygamy."

"Not by a jug-full!" he replied, in that grotesquely and quaintly figurative style so peculiar to the Far West. "There are plenty of cases of the other sort, and I am not the man to send you away with a false impression on that point. I have known jealousies and troubles enough caused by the introduction of fresh wives. And in this connection I am going to tell you what you will find it very hard to believe, but what is, nevertheless, a fact. The women are themselves among the most active promoters of polygamy. Incredible as the statement may appear to you, I tell you seriously that I have known married men entrapped—I might even say seduced—by their own wives into connections with other women, with the object of bringing about their marriage with them. And I must add that, in some of these cases, I have known the poor foolish creatures to have good reason very soon to repent their folly."

I may remark here that Mr. C.'s statements on this subject—incredible as they appear—are fully borne out by other evidence. In 1878, a mass-meeting of 2,000 Mormon women was held in the Opera House, Salt Lake City, to protest against an attempt of the Gentiles of the Territory to interfere with their "peculiar institution." The resolutions passed at this meeting declared polygamy to be "one of the most important principles of our holy religion," and some of the more fanatical of those who attended raised the cry "Polygamy or Death."

I questioned my Mormon companion as to the prospects of Government interference with polygamy, and I found he was doubtful as to whether anything would ever come of it.

"The truth is," he said, "some of the loudest talkers against the system in Congress are afraid to push matters to extremities, for they live in glass houses themselves. Polygamy was threatened again and again during Brigham Young's life, but the threats were never executed. Brigham sent spies to Washington, to worm out particulars as to the manner of life of those who were loudest in their condemnation of polygamy; and he found, or pretended to find, that these very men were practically polygamists themselves, but did not possess the courage and the candour to call their practices by the right name. Whether there was any truth in Brigham Young's statements I do not know; what is certain is, that he threatened exposure of certain politicians, and that, as a matter of fact, nothing effectual was done to suppress polygamy while he lived."

I found a very strong feeling prevalent on the subject of polygamy in some of the Eastern States. More than once, Americans said to me: "We put down slavery, great though the cost was in money and in human life; and some day or other Uncle Sam will put down his foot upon that nest of unclean birds in Utah, and will crush it at any cost." This prediction

is now being fulfilled. Some recent legislation on the subject has enabled the Federal Government to proceed effectually against the polygamists, and the proprietors of some of the largest harems have had to make themselves scarce, in order to avoid arrest. Others have been arrested, and only this week it is reported in the newspapers that two or three of them have been convicted and sentenced to fines and imprisonment.

As long as the Mormons constituted a community apart from the civilized world, separated from the rest of the States by rugged mountains and trackless wildernesses, they were able to count on something like immunity for their unnatural and mischievous social system. They did not obtrude themselves and their institution on the outer Gentile world, and they occupied a position so remote and naturally so strong that it would have been no easy task to coerce them. But the opening of the Pacific Railroad and the spread of population westward have brought about an entire change in the situation. The Mormons are no longer a people and a law unto themselves. They are close to the chief highway of the continent. A great Gentile State has sprung up to the west of them, and on all other sides a people to whom their social system is detestable are gradually closing in around them. The isolation on which they reckoned is already at an end, and it is useless for them to kick against the pricks. It is clear that polygamy has "got to go."

SALT LAKE CITY TO SAN FRANCISCO.

THE NEVADA DESERTS.

As I have already explained more than once, the main line of the Central Pacific Railroad extends from Ogden to San Francisco, a distance of 833 miles. It is simply a westward continuation of the Union Pacific line, which extends from the Missouri River to Ogden; but the two systems belong to and are worked by different companies. The time occupied in the run from Ogden to San Francisco is 37 hours, or about two days and one night. The express train leaves Ogden at 7.15 a.m. and arrives at the western terminus between eight and nine p.m. of the following day. In order to reach Ogden Junction in time, we had to leave Salt Lake City between five and six in the morning. Time is allowed at Ogden for a "square meal" before the Central Pacific train starts on its long journey.

For nearly 100 miles after leaving Ogden, the line skirts the northern and north-eastern shores of the Great Salt Lake. But the lake is not always in sight, as its coast is very irregular, being indented on the north by a peninsula of great length, running, in fact, out almost into the centre of the lake. It is not, however, till four or five hours after leaving Ogden that this great inland sea is finally lost sight of. Before this happens, the train passes a station called Promontory, which is of little present importance, but which has a historical interest that will always render it famous. It was at this point that the "marriage" of the Union Pacific and Central Pacific lines took place, on May 10th, 1869, after the wonderful and exciting competition in track-laying which I described in a former chapter. Promontory being a mere point in space, so to speak—a place of no importance, and not likely to become important, situated, as it is, on the edge of the Great American Desert, the two companies "guessed" that it was not a convenient "location" for the junction of their respective systems. It was, therefore, arranged that the Union Pacific Co. should give up to the Central Pacific the last 53 miles it had laid and retire to

Ogden, and that that place, being the destined junction for the Salt Lake City line southward and for important branches northward, should be the transfer station of the two systems. Of the whole 1,865 miles from the Missouri River to the Pacific coast, 1,032 were thus left to the Union Pacific, and 833 to the Central Pacific.

Soon after passing Promontory, the traveller finds himself traversing deserts such as he has probably hitherto regarded as peculiar to Asia and Africa. But perhaps I am assuming that all travellers are as ignorant as I was, and I had better, therefore, speak for myself alone. I am free to confess that the utter barrenness and enormous extent of these deserts were a revelation to me. Hour after hour—all day long indeed, and all night long too—we traversed a region well nigh as arid, and apparently as useless, as the Sahara itself. The first part of the desert, for about 60 miles, is covered thick with fine alkaline dust. When there is anything like a wind, this dust is raised in blinding clouds, penetrating the cars, however carefully and cunningly they may be closed, and irritating the throats and nostrils of the passengers in a very disagreeable fashion. Luckily for us, there was no wind blowing when we crossed this forbidding region westward; and when we returned eastward, we traversed it while asleep. The alkali dust, therefore, caused us no trouble, but the experience of many travellers is very different.

The alkali plains once passed, the desert assumes a somewhat less forbidding aspect, but it continues, with a little variation here and there, for nearly 500 miles. The only vegetation visible for hours at a stretch is the hardy and lowly sage brush already described. There is little or no vestige of animal life near the railway, but the traveller is told that there is plenty of big game away beyond the bare, savage mountain ranges which almost everywhere close in the view.

It may be thought that a ride through such a country is monotonous and tiresome. Monotonous it is, no doubt, but I did not find it tiresome. As I have already stated, I spent part of the time in gathering information from a Mormon fellow-traveller about the Mormons and their system of polygamy. But, apart from this, the hours did not hang heavy on my hands. There is something to be seen everywhere, if one only brings eyes capable of discerning it. If one gains nothing else by such a journey, he acquires new conceptions of immensity. To rush at the tail of a locomotive, through a whole day and a whole night, across a stretch of territory which on an ordinary map is represented by a perfectly bare patch such as can be covered with the top of the thumb, is to learn how large the world is from some points of view, small as it looks from other points. But there is variety even in the monotony of the desert. The mountains are all treeless and waterless, but they are for ever assuming new shapes, and grouping themselves in new and unlooked-for combinations. To a traveller in any way interested in mechanical affairs the wonderful engineering of the railway is a perpetual study. I shall speak presently of the marvellous feats by which the engineers carried the line across the Sierra Nevada; but apart from this great lift the railway has many ups and downs such as are not to be found on any line in Great Britain. The openness of the country and the remarkable clearness of the atmosphere often enable the traveller to take in vast stretches of the track at a single glance, and to admire the skill with which deep valleys have been crossed, and lofty ridges, which seem to bar the way effectually, have been circumvented or surmounted.

EATING STATIONS AND THE TRIALS OF EATERS.

The three daily stoppages at the "eating stations" also go far to break the monotony of the journey. The train pulls up amid the loud ringing of a bell or the beating of a gong, and there is a wild and general rush from the train to the refreshment room, where (the attendants having been duly informed exactly when the train would arrive) a variety of viands more or less palatable and eatable is already served out into plates. Everybody sets to without ceremony, and as if his life depended on his clearing his plate within so many seconds. As a matter of fact, there is no real necessity for such violent haste. Ample time is allowed for the meal. Everybody knows this, and the officials repeat their assurance of the fact on every occasion. But the assurance produces no effect on the majority of the passengers. For some inscrutable reason, they all bolt their food in one-half the allotted time, hurry back to the platform, and there wait about impatiently for the starting of the train. This haste is contagious, and it is difficult for the coolest calculator of time and of his own eating powers to resist its influence. I more than once muttered hard things; anent my own folly in bolting half a dinner in 10 minutes, when I knew that 20 or 30 minutes were available, and that, whether I ate half a dinner or a whole one, the inevitable dollar would have to be handed over to the man or woman at the door as I went out.

The viands provided at these eating-houses vary greatly, both in nature and in quality. Sometimes the meal is an excellent one; at other times, it is otherwise. But it is fair to remember that, in many cases, almost every article comprised in the bill-of-fare and in its preparation has had to be procured from a distance of hundreds of miles. Now and then, a dish of local origin is to be met with, such as an antelope steak, or what passes under that *alias*; but this is exceptional. The greatest defect in the eating-house arrangements is in the matter of cutlery, if, indeed, the term "cutlery" can be applied to implements which will not cut. The knives are invariably plated articles, which cannot be ground or otherwise sharpened without destroying the plating. Consequently, there is no "cut" in them; and the tough "beef-steak," or whatever the mysterious fibrous substance may be which passes as such, has to be torn to pieces by sheer force. These wretched knives often spoil what would otherwise be a decent meal. This spoiling process is also often assisted by another barbarism peculiar to American refreshment rooms. The coffee cups are simply small, thick, clumsy basins, without handles, and it is almost impossible to drink out of them without scalding the fingers. Imagine a nervous traveller, a stranger to Western ways, trying to get a "square meal" aboard, under these circumstances. He is surrounded by men who understand the business, but who are, nevertheless, bolting their food in defiance of all physiological laws and to the ruin of their digestive organs. They are apparently eating and drinking against time; and in spite of the official assurance, "Plenty of time, gentlemen!" the stranger is caught by the epidemic of haste. Armed with the plated, edgeless knife aforesaid, he struggles manfully with his beef-steak or his antelope-steak, and after a desperate contest contrives to tear it into half-a-dozen pieces. He scalds his fingers and his throat with his coffee, bolts a triangular piece of the inevitable and omnipresent pie, leaves several other delicacies untouched, and rushes to the door with as much nervous anxiety as if he saw the train

already in motion. He probably still has a quarter of an hour to the good, during which he can pace the platform and thus assist his stomach in commencing the cruel task he has imposed upon it.

I asked more than once why the knives had no edges (or rather, I should say, a good fraction of an inch *too much* edge), and the cups no handles. The explanation was always the same. Labour of the domestic kind is so scarce that knife-cleaning of the ordinary kind has to be avoided as much as possible. Plated knives are, therefore, used, because they can be quickly washed, and require no other cleaning. As for the thick, strong, handleless cups, they can be shovelled pell-mell into a tub of water and washed in the mass. If they had handles, this rough, wholesale treatment would soon rob them of those appendages. I was repeatedly half frightened out of my remaining wits, when sitting in eating-houses, by the noise of what appeared like an avalanche of crockery. It was, I found, only some "help" tumbling a tray-full of cups into a vessel of water.

AN OASIS IN THE DESERT.

One of the eating stations on the Central Pacific is sure to live in the memory of all who have passed over the line. It is called Humboldt, the Humboldt River being not far off. It is in the midst of the most arid and forbidding part of the Nevada desert. Barren mountains frown down upon it on every side; sage brush is the only kind of vegetation within the range of vision. The Railroad Company had to bring water from a considerable distance for the supply of its engines; and as its pipes bring more than is required for this purpose, the surplus water has been employed to irrigate a small area immediately around the station. The result is marvellous. Humboldt has become an artificial oasis in the midst of the desert. Numerous trees are growing luxuriantly. There are patches of turf which would do duty very well as English lawns. There is even a fountain playing in the middle of a basin containing gold fish, and diffusing a delightful coolness and moisture all around. The relief with which the eye turns from the desert to feast upon the delightful greenery of this tiny oasis is unspeakable. I said "tiny," and tiny it is. For at the cry of "All aboard!" you reluctantly climb into your car, and before the engine driving-wheels have made a score of revolutions, you are again in the desert, with the prospect of having sage brush and naked hills for your sole natural companions for many hours. The experience gained at Humboldt tends to modify one's opinions as to the hopeless barrenness of the desert. It is apparently all a question of irrigation; and if only an unlimited water supply can be found, the deserts of Nevada may yet "blossom as the rose."

AN UNHEALTHY PLACE FOR EDITORS.

Passing a station called Palisade, about 158 miles east of Humboldt, I noticed a branch line running away towards the mountains to the south; and, not having my map at hand at the moment, I asked a fellow-traveller whither it went. It was, he said, a branch to a mining town called Eureka. Finding he knew something of the place, I questioned him about it. He lived there once, he said. Why did he leave it? Wa'al, because he wanted to go on living. There was, he said, before he went there, only one newspaper in the place—a Democratic organ; and the Republicans of the place induced him, by finding for him several thousand dollars capital, to go there to start an opposition

(Republican) paper. He went and started it, and ran it for a time. It paid him well; nevertheless, he left it, and shook the dust of Eureka off his feet. Again I asked the reason why. Wa'al, he carried his life in his hand all the time he was there. Running a Republican paper in Eureka, and dealing, however tenderly, with public abuses, was to disqualify oneself for insurance in any respectable life office on any terms; it was, indeed, as risky a business as leading a forlorn hope. He had been shot at repeatedly—had been actually shot, though not in any vital part, more than once; and this sort of thing became at last so monotonous that he decided on leaving Eureka—and he left. Two editors who, one after another, succeeded him, had both been shot dead, and nobody had been hanged or otherwise punished for either crime. On hearing this tragical story, I forthwith decided not to accept the editorship of any newspaper in a Nevada mining town. Country journalism in England has its drawbacks, no doubt—a good many of them; but, at any rate, our readers are not accustomed to shoot the editor at sight whenever he happens to bestow a little gentle criticism on them and their doings. The ex-editor who thus edified me with the story of his journalistic life, was a native of Shropshire, and was, when I met him, travelling on behalf of an insurance company—a business which he found safer and more agreeable, if not more profitable, than writing articles and being shot at in the interests of Eureka Republicans.

MORE COINCIDENCES.—A BREAK-DOWN IN THE DESERT.

Between Humboldt and Palisade, I met, on my return journey, with an adventure which is perhaps worth describing here, inasmuch as it was attended by a coincidence almost as striking as the one with which I met at Chicago, where (as already mentioned) I found a Yeovil man in charge of my baggage at the very moment when it was necessary for me to establish my identity and my claim to my trunk. It was somewhat past mid-day, and we had just left behind a station called Raspberry Creek, and entered on a 20-mile run to a place rejoicing in the euphonious name of Winnemucca, so called after a famous local Indian chief. I was discussing with an American fellow-traveller the everlasting question of the relative excellence and speed of English and American railway travelling. He was describing to me a wonderful run of over 100 miles without a stoppage which the Chicago express had recently begun to accomplish daily on the Pennsylvania Railroad, somewhere between Pittsburg and Fort Wayne; and he remarked, with an air of triumph, "Why, they even pick up the water as they run." After a decent interval, to allow him to get a reasonable amount of enjoyment out of his supposed triumph over the Britisher, I said:

"We have done that in England for many years—I cannot say how many; but some of the North Western expresses have certainly watered without stopping for 12 or 15 years."

At this moment, a gentleman in the next section of the car, who had been intently listening to our discussion, turned round, leaned over the back of his seat, and (addressing me) said:

"Yes, sir, for a still longer time. I was a driver on the North-Western myself, and watered my own engine in that way at least *eighteen* years ago."

I stared hard at the speaker; so did my American friend. And well we might. Here, in the midst of the Nevada desert, a witness had dropped down from the

clouds, in the nick of time, to confirm by his own personal experience a statement as to a working detail of a particular English railway. The witness certainly looked very little like an engine-driver, and his turning up at that particular moment was so remarkable that I might have had a little doubt as to the truth of his statement but for an incident which happened immediately afterwards. He had dropped down mysteriously to confirm my assertion; an event at once occurred which put his own statements to the test. The train was suddenly pulled up, for no apparent reason, in the midst of the boundless expanse of sage brush. No station or other building was visible either behind us or ahead, as far as the eye could reach. Looking out of the car window, I saw that the engine-men were crawling under the engine, the conductor and baggage porter standing alongside the line looking on. Something had evidently happened to the engine, and many of the male passengers at once alighted and walked towards the head of the train. The gentleman who claimed to be an old North Western driver was among the first to reach it, and, on learning the nature of the mishap, he at once threw off his coat, crawled under the engine, and set to work to help the driver and fireman as only one familiar with a locomotive could do. The eccentric which gave motion to one of the cylinder valves had broken. Repair was out of the question, and there was nothing to be done but to disconnect one cylinder, and to make an effort to reach Winnemucca by means of the other. The disconnecting business involved two hours of hard work on the part of the engine-men and their volunteer assistant, and many were the speculations among the passengers as to whether a single cylinder, with its two "dead points" at every revolution, would ever get the huge train under way. It happened, however, that the line was almost perfectly level all the way to the next station, and, once moving, we got on at a very fair pace. Another engine was waiting for us at Winnemucca, and the time we had lost was easily made up before we reached Ogden.

OVER THE SIERRA NEVADAS.

On our westward journey, we retired to our berths in the midst of the desert, soon after passing Be-o-wa-we, a place which is doubtless perfectly familiar to my readers. When we rose in the early morning, we had begun to ascend the valley of the Truckee River, and we knew that the glories of the Sierra Nevada mountains were near at hand. We stopped for breakfast at Reno, and from this point westward the journey increased in interest every mile. The mountains, clothed with forests, were closing in around us, and the scenery formed a perfect contrast to that on which we had looked during the whole of the previous day. I have already described so fully the mode in which the railways of the West approach and scale a great mountain chain that I need not enter into details on this occasion, except in so far as the Central Pacific engineering is peculiar.

The ascent of the Sierra Nevadas really begins at a place called Browns, which we passed soon after four in the morning. That station is 3,929 feet above sea level. By the time we reached Reno, our breakfast station, we had risen to 4,497 feet. Between this point and Truckee, which was reached at 10 o'clock, another 1,300 feet is added to the height, the altitude of Truckee being 5,819 feet. It is between Truckee and Summit that the greatest rise takes place. In that distance of 15 miles, the train is lifted bodily

exactly 1,200 feet, and this short run occupies an hour. In that distance, the line doubles back upon itself twice. It follows the left-hand side of a deep valley for several miles, rising all the time; it then crosses the valley and turns back along the opposite side, still mounting higher and higher at every step. It is thus brought to the end, and nearly to the top, of a spur of the main range; and, turning sharply round the shoulder of this spur, it resumes something like its former direction; and the train at once loses sight of the valley up which, first on one side and then on the other, it has been toiling so long.

There is one drawback to the enjoyment of this wonderful ride, and that is a serious one. The snow-fall in the Sierra Nevada is immense, and all the higher levels and more exposed parts of the line have to be protected from snow drifts and avalanches by timber sheds of enormous strength. These snow-sheds almost deserve a chapter to themselves. Their vast extent, their great cost, the elaborate and expensive precautions which have to be taken to protect them against fire, are all matters of the greatest interest. But my space is limited, and I must not go into details. Suffice it to say that, when about half-way between Truckee and Summit, the train rushes into one of these sheds which, with a few breaks of a few yards each, extends for 28 miles. Summit Station itself is in the shed. It is tantalizing in the extreme, as you rush through these interminable galleries, varied occasionally by a short tunnel through solid rock, to know that you are in the midst of some of the most gorgeous scenery on the American continent. Now and then, the train rushes into the open for a few seconds, or you catch instantaneous glimpses of the outer world through small openings in the side of the shed, and thus you become conscious of the fact that, far down in the valley below you, there lies a lake of the most exquisite beauty, embosomed in forests and mountains. This is Donner Lake. Lake Tahoe, a much larger and equally beautiful sheet of water, is in the immediate neighbourhood, though not visible from the line. The whole district is, indeed, so charming, that the traveller who can spare the time ought to stop at Truckee for a few days, and make it his business to explore it thoroughly.

But, the snow sheds once passed, the run down into the plains of California is an experience of marvels and delights such as can never be forgotten. At no one point between Ogden and Summit does the line fall below the 4,000-foot level, so that the ascent of the mountains on the east side is only about 3,000 feet, and this rise is spread over 130 miles. But on the western slope the descent of the whole 7,000 feet, right down to within 50 feet of sea level, is made at one gigantic plunge, between Summit and Sacramento. The distance is but little over 100 miles, and the time occupied in the run down is five hours. In that time and distance, the train falls through a space equal nearly to half the height of Mont Blanc. The Colorado railways already described ascend to greater heights than the Central Pacific reaches at Summit; but then they all start from a high level—viz., that of the Colorado plain, which is more than 5,000 feet above the sea. There is not one of them which rises 7,000 feet in little over 100 miles. In that respect, the Central Pacific stands alone, in North America, if not in the world.

For five successive hours, the train needs little steam-power to keep it moving. The driver's chief business is to moderate, by means of the brakes, the

downward rush due to gravitation alone. 1,400 feet perpendicular per hour is the rate at which the train is thus let down, and 70 feet per mile is the average gradient. On the first 50 miles west of Summit, the gradient is 85 feet per mile.

I need hardly say that such a descent as this, through a range of rugged mountains, was not accomplished without a display of engineering skill of the most daring kind. The 50 miles of line immediately west of Summit displays, indeed, the most wonderful engineering to be seen on any part of the main route between New York and San Francisco. The journey over this section is full of surprises. The most unsusceptible and matter-of-fact passenger is roused to something like enthusiasm, and rushes about from side to side of the car, or to and from the platform at the end, so as not to miss a single scene in the ever-changing panorama. The scenery itself is superb, and one's enjoyment of it is heightened by the endless variety of points from which the moving train allows it to be viewed. The train winds about like a huge serpent, here to avoid some towering height which rises straight up in its path, there to circumvent some deep ravine which for the moment seems to render its further progress impossible. Here and there, it clings to and winds round the bare face of an almost perpendicular mountain, on a mere shelf which was blasted out of the solid rock by workmen let down by ropes from above. The most noted point of this description is called Cape Horn, some 50 or 55 miles above Sacramento. Looked up at from the American River Canon, nearly 2,000 feet below, the railway appears to be simply a thread stretched round the mountain's brow. A nerve steadied by previous experience is needed to enable one to look down from the line into the Canon, unmoved, even though the train may be cautiously working its way round the face of the precipice at a speed of only 10 or 12 miles an hour. There is, however, nothing to fear. The line is well laid on the solid rock; the rolling stock is of the best; the brakes are simply perfection; and the engineers the most careful of men, working by strict rule. A flying leap into the valley is, of course, possible; but no train has yet accomplished the feat, and there is no particular reason why it should ever be performed. Those who are thinking of going to California need not be deterred by thoughts of Cape Horn. The thought of it and the neighbouring marvels ought, on the contrary, to be among the greatest inducements to them to undertake the journey.

Before the train has completed its descent into the plains, the traveller begins to realise to what an extent man is capable of spoiling the most beautiful natural scenery. The line passes through a district which has yielded vast quantities of the precious metals, and the operations of the miners have converted a great part of the region on both sides into a hideous wilderness. For mile after mile, the country looks as if it had been devastated by a particularly insane earthquake. The very bowels of the earth appear to have been turned inside out, and left exposed in all their hideous ugliness. And that is precisely what has happened. The miners found that hand digging with spade and pick was too slow a business, and with true American ingenuity they called to their aid the only great natural force immediately available. That force was water, of which an endless supply was always pouring down the mountain side. Not only was the quantity ample, but it all poured down from great heights; that is to say, there was plenty of "fall"; and where there is abun-

dance of water and plenty of fall, there is power. The problem was how to make the water dig the gold. The problem was very soon solved, and hydraulic mining came into existence.

The water is taken prisoner at a great height above the scene of operations, and brought down in pipes constructed to withstand tremendous pressure. As it issues with little less than the force of a cannon-ball from a nozzle at the lower end of the pipe, the stream is directed upon the soil which has to be broken up, and the soil goes down just as if it were so much salt or sugar. The most closely-packed strata are powerless to resist the jet. They literally melt away. The softer materials are washed into the streams; the harder ones, even when consisting of rocks of considerable size, are effectually scattered. Whatever gold there may be is easily secured from among the smaller *débris*. The pressures at which these jets are used are such as one never hears of except in connection with the hydraulic press. Sometimes the head of water exceeds 500 feet, and I have heard of a pressure of 1,300 lbs. to the square inch. Such a stream, issuing from a six-inch nozzle, comes out as solid, apparently, as a cylinder of ice. Its force is irresistible. The most solid bed of cement crumbles away before it, and huge boulders, weighing tons, are tossed about as if they were pebbles.

Imagine many square miles of soil literally torn to pieces and disintegrated by such a potent agency as this, and then left in the state of chaos to which it has been reduced, and you will begin to form an idea of what the country alongside the Central Pacific Railroad is like in the neighbourhood of Dutch Flat and Gold Run.

But the mining region is soon left behind; and the train, still running down hill, but upon a gradient which is constantly becoming gentler, enters on one of the great wheat-growing districts of California. That State was entered several hours before—some time, indeed, before the summit of the Sierras was reached; but it is not until, first the gold-fields, and then the wheat-fields are reached that one begins to discover the features which are supposed to be characteristic of the Golden State. The wheat had all been cut and thrashed long before the date of our visit; and the grain, in countless sacks, was stacked in the open air in huge, symmetrical blocks as large as English corn ricks. I was told that it might be safely left there for many weeks more without running the slightest risk of being damaged by rain. The seasons of California are, apparently, slightly more regular and trustworthy than the weather of the British Islands.

To the wheat fields succeed vineyards on a large scale. At one point, the line passes through a single vineyard which I was told contained 2,000 acres. Wine-growing is one of the many industries of California, and it is carried on on an ever-increasing scale. The grape is only one of the fruits which the State yields in abundance and in perfection. Long even before we reached Denver, the newspaper boys in the cars brought round for sale magnificent pears which hailed from California. Considering their abundance, they were abominably dear. "Three for a quarter" was the usual rate; that is to say, the pears were about 4d. each. I remember telling one of these lads—a particularly "cheeky" youngster—that the fruit was too dear for me. "Oh, well," he said, "when you get to California, you will be able to steal it." Presently, he came round in the most unconcerned way and pressed me to buy some-

thing else. It was then my turn. "No, thank you," I replied. "I may as well wait till I reach California, and steal that too."

Between Sacramento, which is the state capital of California, and San Francisco, which is its commercial capital, the traveller has to cross two separate arms of San Francisco Bay. The first of these crossing-places is at Benicia, and here the train (engine and all) is taken on board a flat-bottomed steam vessel of huge dimensions and ferried across bodily. This ferry-boat is said to be the largest of its kind in the world, and it is certainly a marvellous structure. Three or four lines of rail run parallel to each other over its whole length. It lies in a dock which it exactly fills, and an inclined plane, turning on a pivot at one end and rising and falling according to the state of the tide at the other, connects the land lines with those on the dock. On the arrival of the train, it is broken up into three or four sections, and run upon the deck with a celerity which is simply amazing. In a very few minutes, the huge boat is moving off towards the opposite shore, a distance of two or three miles. On its arrival there, it is steered with the greatest accuracy into a dock similar to that from which it started, an inclined plane—the counterpart of that on the other side—is lowered upon the dock, and in a little time as it takes to write this description the various sections of the train are dragged ashore, coupled up, and started on the last stage of the journey. The actual terminus of the railway is at Oakland, a suburb of San Francisco, separated from the city by the whole width of the harbour. Here the traveller finally leaves the cars, enters a magnificent ferry boat belonging to the railway company, and in a few minutes is put ashore at the foot of Market Street, the great central thoroughfare of San Francisco. We arrived there late in the evening, and at once entered a cable car, which within five minutes set us down at the doors of the "biggest hotel in Creation."

SAN FRANCISCO.

THE GOLD FEVER OF '48.

It was in the year 1848 that California's vast stores of gold were first revealed to the world, and those whose memories go back to that period will readily recall the wild excitement to which the discovery gave birth, and the equally wild rush which adventurers from every point of the compass made for the Golden Gate. I was at that time about 14 years of age (ladies who are curious about my age, please copy), and I remember the excitement and the rush as distinctly as if they were things of but yesterday. I have good reason to remember them; for the truth is the gold fever and the thirst for adventure seized upon me, even as they seized upon thousands equally young. The stories daily published of men growing rich in a day fired my youthful imagination, and I went to bed nightly to dream overschemes of working my passage out to the golden land, and of returning, after no long absence, the possessor of untold wealth. Fortunately for their peace of mind, my friends never knew how near I was at one time to making an actual start.

It is an amazing fact that San Francisco has come into existence, and grown into a city greater than Bristol, since the period which is thus so well within my own recollection. The site now covered by the city was in 1848 a group of barren hills, some of which consisted of loose sand, blown hither and thither by the strong Pacific breezes. Among the earliest settlers was a

gentleman of my acquaintance who is now spending the remnant of his days in a West of England city. When he and his brother entered the Golden Gate with a stock of drugs which they had brought from Buenos Ayres, they had to transfer their belongings from the ship to boats, to row as near the beach as possible, and to finish the business by wading ashore with the goods on their shoulders. And this was at a spot where stately ships from all parts of the world now load and unload daily alongside miles of quays and wharves.

San Francisco contained about a thousand inhabitants in 1848, but two years later the population had increased to 25,000. In 1860, the number was nearly 57,000; in 1870, it had reached 150,000; while at the present moment it is understood to be about 280,000.

A GRAND POSITION.

It would not be easy to imagine a more splendid position for a great commercial city than that of San Francisco. A vessel approaching it from the open Pacific sails first up a channel less than a mile in width and about six miles in length. The entrance to this channel is the far-famed Golden Gate, so called either from the fact that it is the ocean gateway to the Golden State, or, as I have elsewhere heard the name explained, because the setting sun pours a flood of golden light up the channel. Arrived at the inner end of this channel, a vessel finds itself in San Francisco Bay—an inland sea of considerable length, and entirely landlocked except as regards the Golden Gate entrance. This inland sea constitutes a single vast harbour, protected by two peninsulas of varying width from the storms of the open ocean. These peninsulas, whose extremities are separated by the Golden Gate, run respectively north and south. The northern half of the inland sea thus enclosed sends a long arm up into the country eastwards. As each of the peninsulas is something like 30 miles in length, the main bay is over 60 miles long, and it is obvious that it and its eastern branch present between them a coastline of vast extent. This coast is dotted with numerous cities and villages, all of which possess water communication with San Francisco, to which they all look up as the London or New York of the whole district.

San Francisco stands at the northern extremity of the southern peninsula already described, and slopes down eastward to the shore of the bay. A vessel which has entered by the Golden Gate, therefore, turns southward (or to the right) as soon as she reaches the bay, and almost immediately finds herself off the city quays. Those who have followed me in this brief description of the situation of the city, and who remember that this was the nearest part of the coast to the rich gold-fields discovered in 1848 and 1849, will find no difficulty in understanding why San Francisco has become the greatest inlet and outlet for the commerce of the Western States and Territories. Not that the supremacy of the city has been altogether unchallenged. The opening of the Northern Pacific Railroad has recently elevated Portland (Oregon) into a sort of rival, at a very humble distance, of its mighty and wealthy neighbour; and the approaching completion of the Canadian Pacific Railroad is sure to be followed by the springing up of other Pacific ports at a still higher latitude. Between the competition of Portland and the general depression of trade throughout the States, the prosperity of San Francisco has of late suffered a slight check. But I do not believe it possible for any rival to supplant her. The more northern ports will, undoubtedly, thrive on the trade of

the vast districts of which they form the outlets, in proportion as those districts become settled; but nothing can rob the older city of her splendid natural advantages, or of the fruits of her own marvellous enterprise. The attempts of the other and newer cities to overtake her will probably be similar to the efforts of a child to overtake a man in the matter of age. The boy rapidly adds to the number of his years, and becomes successively a youth and an adult man. But the man adds to his years also, and always maintains the original distance between himself and his rival. So, I apprehend, Portland (Oregon) and the city which has yet to be built at the terminus of the Canadian Pacific Railroad will grow in size and prosperity as they grow in years; but I shall be greatly surprised if the great city which sits at the Golden Gate should fail to keep them well in the rear.

The city stands mainly, as I have already explained, on a group of hills. Some of the lower parts, however, are on "made ground"—that is, on ground reclaimed from the harbour. Where the ships of the first comers floated in deep water in 1848 there are now paved streets, full of bustle and trade. Some of the hills were originally cut up and separated by abrupt gullies and ravines. These have been filled up; but the slopes of some of the hills are still so steep that, although they are laid out in streets and partially built over, no ordinary wheeled vehicle can traverse them. It was in order to provide a means of locomotion specially suited to these frightful gradients that a Californian genius invented the cable car, a full description of which was given in one of my articles on Chicago, a city where it is also largely used. For such hilly streets as some of those in Francisco, the cable car is admirably adapted. But for it, indeed, some of the streets could never have been used at all for locomotion, and would probably never have been constructed. As the Pacific coast and the Golden Gate are approached, the hills gradually assume a more and more sandy character, until at last they take the form of mere heaps of loose white sand, utterly devoid of vegetation, into which sand the pedestrian sinks over his boots at every step. Impelled by the strong winds which blow daily from the Pacific, this sand whirls and shifts about continually. It is apparently engaged in a perpetual effort to reconquer and overwhelm the districts which have been reclaimed and built over, and if it were left to itself, it would undoubtedly very soon succeed so far as the northern and western outskirts of the city are concerned. But the contest is not a one-sided one. The citizens not merely hold their own against the sand; they are constantly, if slowly, pushing the enemy back towards the ocean. Some of the sand mounds have been removed bodily, while in other places the arid wastes have been planted with special kinds of shrubs and grass, which presently bind the surface together, and check, if not altogether stop, the drifting.

THE GOLDEN GATE AND ITS PARK.

Between the city and the Golden Gate the visitor comes suddenly upon a charming park, rivalling, in the beauty of its trees, the verdure of its turf, and the perfection of its flower-beds, any English park I know, public or private. It is difficult to believe that this paradise has been created out of the desert. Such, however, is the almost literal fact. There were, I believe, a few groups of rather scrubby trees on the site when the work of laying out the park was commenced; but they constituted about the only element which

unassisted Nature contributed to the work. A lavish expenditure of labour and money has done the rest.

No visitor to San Francisco fails to visit the Golden Gate, and to look out across the mighty Pacific towards far-off China and Japan. On the edge of a cliff, a few hundreds of yards south of the Gate entrance, stands a refreshment house called the Cliff House, and hither and to the beach below the San Franciscans resort in their thousands on all popular holidays. The Cliff House has a long balcony overhanging the cliff. Here visitors sit with field glasses obligingly provided for the purpose, and connected by a chain to a large ring, which the observer puts over his head, so as to save the glass from destruction if it happens to slip from his hand. The special object of the glasses is to enable visitors to get a good view of a great herd, or flock, or school, or shoal (which is it?) of seals and sea lions which are everlastingly disporting themselves upon and around a group of rocks a few hundred yards from the shore. These strange creatures are public pets, being protected from molestation by a city ordinance or a state law. Their gambols are certainly very amusing. Every moment some of them take headers into the waves, while others are scrambling up again in their clumsy fashion. All the time, they keep up an incessant noise which is a cross between a grunt and a bark. Everybody has to see the seals. A stranger who had visited the city without paying his respects to them would be regarded as "real mean." He would be looked upon as a rustic who goes to London, and fails to see the Zoo, is regarded by his fellows. There is, however, something besides seals and water to be seen from the Cliff House. In and out of the Golden Gate pass ships innumerable—great steamers for China and Japan, others, equally fine, for the Sandwich Islands and Australia, splendid sailing vessels crammed with grain for Liverpool and other European ports, some kind of craft or other for everywhere. The Golden Gate is the channel between the whole of the United States on the one hand and India and the Far East on the other; nay, certain kinds of light traffic between Western Europe and China and Japan pass through the great Californian port.

STREETS AND BUILDINGS.

The streets and buildings of San Francisco vary immensely in character and attractiveness. Some of the main thoroughfares are lined with splendid public and private buildings, and are provided with good solid stone sidewalks of great width. Of the street paving little that is favourable can be said, except where the Cable Car Companies have laid narrow tracks of squared and perfectly-fitting stone between their rails. Whoever wants to ride without dislocating his joints and bruising his softer tissues in an alarming manner eschews every kind of vehicle which does not run on rails. The cable cars carry one anywhere and everywhere for five cents. The street hacks and coaches reckon their fares by the dollar, probably because the badness of the paving renders it necessary to repair or renew their springs daily.

But many of the streets are still lined almost throughout with the dingy wooden shanties which were hastily "run up" in the early days of the city; and in nearly all such streets as these the sidewalks are still of wood, more or less worn and rotten. While the softer parts of the planking have been worn almost through by the daily tramp of ten thousand well-shod feet, the hard knots and the heads of huge nails are left standing up like the rocky pinnacles of a

Colorado "park" on which erosion has produced little effect. It is unnecessary to say that such a side-walk has to be navigated with the greatest care, even when no gaping pitfalls, due to the actual breaking away of the planks, exist—as, however, they often do. The tolerance and good humour with which Americans put up with dangers and nuisances of this sort are phenomena which simply amaze foreigners. The citizens, who elect their own local rulers, have nobody to blame but themselves, and I suppose it is because they fully recognise this fact that they tolerate without a murmur a state of things which would drive an English community frantic, and lead to the summary lynching of its Corporation or Local Board.

But while San Francisco runs the outskirts of Chicago hard in the matter of dingy and repulsive frame shanties, it shows the world what wood is capable of as material for housebuilding in the hands of skilful architects, instructed by rich men who are prepared to spend freely. There are in San Francisco, especially on California Street, mansions, consisting almost entirely of wood, which, for size, apparent stability, and architectural beauty, yield the palm to few West-end-of-London palaces. Until I came near enough to examine these buildings closely, I could not believe that they were not built of massive masonry. It may be asked why men to whom money is no object should prefer to build their houses of a material which is so easily burnt and so prone to decay as wood. But the truth is, the particular timber which is now mainly used in building in San Francisco is a red wood from the Sierras, which neither burns freely nor decays readily. Moreover, fire and decay are not the only enemies the inhabitants have to think of. The city is liable to slight shocks of earthquake. These are seldom or never serious enough to throw down any decently-built house; but, of course, there is never knowing exactly what may happen, and many citizens prefer to keep on the safe side by building with materials which are not easily shaken to pieces. It is said that there are wooden palaces in the city which cost a million dollars. I cannot vouch for the accuracy of this estimate; but, speaking from personal observation, I can say that the mansions of Mr. Stanford and Mr. Crocker, magnates of the Central Pacific and Southern Pacific Railroads, and of one or two other possessors of millions, are apparently among the most costly private residences I ever saw. When I was in the city, a plot of ground on California Street, at the top of a hill commanding a fine bird's-eye view of the place, was being prepared for the erection of a mansion for Mr. Mackay, the Silver King, whose income is said to be a million or two sterling a year. It need hardly be said that his house will constitute another notable addition to the city.

A HUGE HOTEL.

Speaking of my arrival in San Francisco, I said I went at once by car to the "biggest hotel in Creation." On consideration, and not being a Yankee, I withdraw that statement, as I know nothing of the hotel accommodation in the other planets, to say nothing of more distant worlds. But I think I am safe in saying this—that the Palace Hotel, San Francisco, is, even now that the vast Hotel Metropole is open in London, the largest place of the kind in the world, with the exception of one or two huge caravanserais, at Saratoga and elsewhere, which are "run" only a small part of the year. The "Palace" covers an entire block, and therefore faces four separate streets. It is

344 feet by 265 feet, and is seven stories high. The ground story alone has a height of over 27 feet, and the other stories are from 14 to 16 feet. The building is, therefore, something like 130 feet high. Every outside window is a "bay;" and as there are three or four hundred of these windows, the building, as viewed from any commanding standpoint, towers above the general level of the city roofs like a gigantic square birdcage. The walls are of stone, but they are so braced and interlaced with iron that it is believed the hotel could only be seriously damaged by a really violent earthquake. Of its monotonous architecture the less said the better; but of its adaptation to the purposes of a great hotel it is difficult to say too much. It is built round a vast central court, whose glass roof is on a level with the main roof of the building. This court is surrounded by an open gallery on each of the six upper floors, and the galleries are supported by round and graceful pillars, for which I felt considerable respect as long as I thought them polished marble. When I found, through noticing a long slit in one of them, that they were only painted wood, my respect evaporated. The arrangement is, nevertheless, a very effective one, especially when the court is illuminated by the electric light, and animated groups are moving about below or promenading the numerous galleries above.

The Palace Hotel contains 1,300 rooms. The week before we arrived there, the Knights Templars—some kind of Masonic body—from all parts of the States had been holding their annual gatherings in the city, and the hotels were filled to overflowing. We were told that the "Palace" contrived, by putting an extra bed in every room and filling the wide corridors with other beds, to sleep—at any rate, to provide with lying-down places—3,000 persons. Its culinary department was even more severely tested, for it was said that 5,000 persons were fed daily. I heard that 100,000 dollars passed through the hotel cashier's hands during that week. We met the "knights" and their "ladies" returning eastward in shoals as we went westward, and by the time we reached the city, the vast crowd of visitors had, fortunately, disappeared; but many of the gaudy decorations which the citizens had put up in honour of their guests still hung about the streets with a faded and belated air.

A MIRACLE.

About six o'clock in the evening of the first day we spent in San Francisco, my travelling companion telegraphed home to his friends, to let them know we had reached the extreme limit of our wanderings. Next morning, when we came down to breakfast, a reply from his family was awaiting him. The marvels of the telegraph have become so familiar and commonplace a theme that it is not easy now-a-days to pump up much amazement over them. But I confess that the promptness of this reply brought home to me, as no similar event had ever done, the apparently supernatural character of the agent which we daily compel to do our bidding without a thought as to its marvellous way of doing it. For two whole months, we had been pushing westward more or less rapidly—over the trackless ocean, up great rivers and inland seas, across interminable prairies and weary deserts, and over the summits of lofty mountain chains. Between 7,000 and 8,000 miles of these vast obstacles separated us from home. Nevertheless, without going outside of our hotel, we were thus able to speak to those whom we had left behind, and thus to hear their reply. While our friends at home were sleeping, the swift

messenger was rushing towards them, with the welcome message on his wings, with a speed which arithmetic finds it hard to express. Vaulting over mountain ranges, rushing across desert and prairie alike, plunging deep down into the ocean on the wild coast of Newfoundland and climbing up out of it again on the shores of Ireland or Cornwall—swift as light, swifter than the pen or the imagination can follow the various stages of the mighty journey—this messenger sped, and he laid his message on a certain breakfast table in a far-off Somersetshire village. Despatched almost immediately with an answer, untired and untirable, he flew back while we slept, and his missive was under the roof of our hotel long before we came down to our breakfast. The same kind of thing is, of course, going on daily, and familiarity with the phenomenon has blunted our sense of wonder, if it has not, in the words of the proverb, bred contempt. But it is as wonderful as ever, and we are apparently as far off as ever from an explanation of the seeming miracle, useful and docile as we find the miraculous agent to be.

MORE HOTELS.—THE BIGGEST TELESCOPE IN THE WORLD.

The "Palace" is not the only monster hotel in the city. The Baldwin House is another enormous place, which in the splendour of its appointments is said to be second to no hotel in the United States. The Grand, the Occidental, the Russ House, and the Lick House are other first-class hotels. The last-named took its name from its builder and first proprietor, Mr. Lick, an eccentric Californian who left nearly the whole of his vast wealth for the construction and endowment of an astronomical observatory, to possess the most powerful telescope in the world. Mr. Lick was a man of little education, but he took it into his head that he would like his own State to "lick Creation" in the matter of an observatory. He was bent on securing "a million-dollar telescope" for it, and caused inquiries to be made in Paris as to whether the construction of such an instrument was practicable. The reply of the Parisian instrument-makers was exactly what so shrewd a man as Mr. Lick might have been expected to anticipate. They said: "Why, if we make you a telescope and charge you a million dollars for it, of course, you will have a million-dollar telescope"—which nobody can deny. Mr. Lick did not live to see his great design carried out; but the trustees of his estate have built the observatory on a suitable eminence, and the telescope is now in course of construction somewhere on this side the Atlantic.

A STRANGE CLIMATE.

The climate of San Francisco is said to be very healthy, but truth compels me to add that it is not pleasant. The city suffers no great extremes of heat and cold as between summer and winter. The average temperature at sunrise for the whole of February, the coldest month, is above freezing point, and the average at mid-day in the hottest months (June to September) is only 64°. The difference between summer and winter is comparatively small. It is the differences which arise during the same day that are the trying and disagreeable element in the climate. It is impossible to know how to dress. During the forenoon, it may be very warm—warm enough to induce a stranger to don his thinnest summer raiment. But soon after mid-day, a cold wind sets in from the ocean which soon pulls the thermometer down 10, 15, or 20 degrees,

and continues to blow till night-fall. This happens pretty regularly for six or seven months in the year, and those the months which we call summer. And, unfortunately, this ocean breeze does not come empty-handed. It brings with it a white mist which rolls in dense clouds up and over the hills, rendering it provokingly difficult to obtain a complete view of the city at any one time. The wind brings, too, a good deal of sand from the sandy hills already described, and it is difficult sometimes to say whether the solid or the fluid contributions of the breeze to the discomfort of the inhabitants are the greater nuisance. As the sand-hills are conquered piecemeal, and built over or brought under cultivation, the plague of sand will gradually abate; but it is not easy to see how the fogs are to be abolished. It was at the end of August and beginning of September that we were in San Francisco. We required our neck wrappings and overcoats buttoned close up every afternoon, and there were blazing fires daily in the drawing-rooms of the hotel. This sounds strange to those who remember that San Francisco is in the same latitude as Naples. A little work on California now before me thus sums up the climatic peculiarities of the city:—"There is no conceivable admixture of wind, dust, cloud, fog, and sunshine that is not constantly on hand during the summer at San Francisco." I ought to add here that the climate of San Francisco is not a fair specimen of that of California generally. The cold ocean breezes and mists penetrate but a short distance inland. Oakland, on the opposite side of the bay, and within half an hour's steaming of San Francisco, is almost entirely free from them, and its delightful climate has induced many of the wealthy citizens to fix their residences there.

RENTS AND THEATRES.

San Francisco is a very expensive city to live in. The smallest coin in use is 5 cents (2½d), and about the only cheap thing to be had is riding in the street cars. There is no way, so far as I could learn, of getting one's boots blacked except when they are on the feet, and the charge is usually 10 cents (5d). Domestic servants command fabulous wages and have to be allowed to do pretty much as they like. The citizen who cannot help himself, and who is not rich, is very much to be pitied. Rents are enormous, especially in the leading business thoroughfares. I fell in with a man from Torquay who was keeping what is known as a "gentlemen's furnishing store" in a leading thoroughfare. His shop was, perhaps, 30 feet long and 12 feet wide, and this was the only part of the building in his occupation. For this single room he told me he paid 130 dollars a month, or about £325 a year, and he considered he was lucky in retaining it at the price. He would hardly have paid more for such accommodation in Cheapside or the Strand.

San Francisco has several theatres. Seeing that "Our American Cousin"—the piece in which the late Mr. Sothern made his reputation and his fortune as Lord Dundreary—was announced to be performed at one of them, I went to see how the "cousin" would manage the business in his own country, and how an American would enter into the part of the lisping, foppish, but "noble" noodle whom poor Sothern immortalized. These and some of the other prominent characters were excellently personified, but there was one very amusing feature about the play. Those who are familiar with it will remember that a young lady, who appears a good deal at certain stages of the performance, is continually

complaining that she is "so very delicate." This, indeed, is almost all she does say. But the manager on this occasion had (so I was told) to fall back upon an amateur to fill this part, and the amateur happened to be a buxom damsel with a broad Western accent. The incessant reiteration, by this plump, jolly-looking girl, of the complaint, "But I'm so vurry delicate!" was one of the most comical things I ever witnessed, and every repetition of the threadbare remark was received with roars of laughter. The girl made laudable attempts to look sad and to throw a plaintive expression into her voice; but her natural robustness and high spirits were too many for her, and her success was not proportionate to her efforts.

Another favourite place of entertainment is Woodward's Gardens, which are a combination of a zoological garden, a fine museum, a botanical collection, an art gallery, an aquarium, and various kinds of performances. The visitor sees all this for 25 cents (1s), and it is, therefore, necessary for me to qualify my remark that riding in street cars is the only cheap thing in the city. Nearly all the theatres and other places of amusement are open Sunday and week-day alike.

THE "HEATHEN CHINESE."

One of the strangest and most interesting features of San Francisco, as seen by the stranger, is its large Chinese population. In spite of the determined opposition, and I may add the cruel persecution, of the native working classes, the Celestials have continued to crowd into the State in such numbers that San Francisco alone contains more than 20,000 of them. They have succeeded in obtaining possession of a cluster of streets in the very heart of the city, and their invasion of the native American quarters is very much resented. But it appears impossible to stem the steady advance of these patient, long-suffering people. If they once contrive to secure a footing in a street, the whole street is sooner or later abandoned to them. Their presence at once reduces the value of the houses and shops next to their own, and the owners of such property are presently glad to sell it to the irresistible invader at any price they can get. The completeness with which the Chinese have contrived to obtain entire possession of many whole streets in the district of which Washington Street is the centre, is very remarkable. An evening walk through this region, which is known as Chinatown, is a curious experience. At a single step, so to speak, one passes from Europe to the Far East. (I speak of Europe, of course, as including all American communities of European origin.) I have never experienced so strange and startling a change except in crossing from Gibraltar to Tangiers. That, of course, is a transfer of oneself from Europe into what is virtually a combination of both Asia and Africa, and it is an experience which I strongly recommend to all who may ever happen to find themselves within easy reach of the entrance to the Mediterranean.

The streets of Chinatown, San Francisco, are swarming with the pigtailed Orientals. The houses are crammed from cellar to garret, and their enemies (and some of their friends, I believe) declare that they live in a state of physical filth and squalor and of moral degradation such as the worst slums of our large cities do not approach. The Chinaman, when in the streets, is usually so clean and neat in his appearance, that it is very difficult to believe all this. If, indeed, it is all true, John must possess a remarkable faculty of keeping

himself apparently decent under very unfavourable circumstances. That the Chinese indulge in habits of a very objectionable kind is sincerely believed by many intelligent and unprejudiced persons. One of the State Judges whom I met in a railway train assured me that he had no sympathy whatever with the jealousy with which American working men regard their Asiatic rivals, still less with the brutal violence to which the latter are subjected by the "hoodlums" of the city. But he, nevertheless, objected strongly to their admission into the country, on the ground that they brought with them from China unmentionable vices with which he feared the native population might become infected.

Various attempts have been made to stop the tide of Chinese immigration. First violence on a wholesale scale was tried. That failed utterly; no amount of beating or killing stopped the Chinaman. I was told, when in the city, that the State Government tried the effect of prohibiting the export of human bodies. This appears to be an eccentric cure for Chinese immigration, but it was expected to touch the Chinese on his religious side. It is a part of his rather short creed that it is necessary, or at least desirable, with a view to his comfort in the future life, that he be buried in Chinese soil; and the result is that every Chinaman looks forward to the time when he will either return to China to die, or be carried thither for burial by friendly hands should he happen to die abroad. Thousands of dead Chinamen have, in obedience to this superstition, been sent across the broad Pacific and interred in their native land. It was thought that, if this curious export trade could be stopped, the Chinese would not imperil their future by running the risk of being buried permanently in foreign soil. It is said that Chinese ingenuity was too much for the Californians even here. I was informed that shiploads of earth from China had actually been brought across the ocean and deposited in the Chinese cemetery, so that Orientals might, after all, be buried in "Chinese soil" even if the export of their bodies were stopped. What became of this law, if it ever existed except in the imagination of my informant, I do not know; but certain it is that the remains of Chinamen were being exported freely enough about the time I was in the country. Mr. Lucy, of the *Daily News*, who crossed the Pacific a few weeks after my return, said there were a number of bodies on board his steamer.

Various attempts on the part of the Californian Legislature having proved abortive, owing to the Chinese landing in other States and smuggling themselves across the frontier, the aid of the Federal Congress at Washington was invoked, and laws were enacted against the free immigration of Chinese which applied to the whole country. These laws have, I believe, checked the immigration, but have by no means stopped it; and the Chinese Question is, therefore, still one of the chief factors in Californian politics.

The Chinaman is so ingenious, industrious, and frugal, that it is a pity he is intolerant from a sanitary and moral point of view. Much as he is disliked, all unprejudiced Californians admit that his patient labour has done great things for the State. In railway building, in mining, in the laundry, in every kind of drudgery at which the native American and the imported Irishman turn up their noses, John Chinaman has done yeoman's service. He makes a capital domestic servant, his quickness to learn, and to imitate what he has once seen another do, being perfectly marvellous. In the laundry business the Chinese have a monopoly in almost every city of the Far West, and they are run-

ning the native washerwomen close as far east as Montreal and New York. The names which some of these Celestials exhibit on their sign-boards are odd in the extreme. Here are a few I copied:—Sam Sing, Hung Hen (suggestive of an ancient rooster that needs "hanging" before cooking), Ho-2, Chuck, Hop Wee, Wo Joy & Co., G 2 Hong Fat. My private opinion is that the fathers and mothers of these Celestials would never know then under these names. A good deal probably depends on the humour of the American sign-painters. When a raw Chinese laundryman, with an untranslatable name, goes to a painter to get that name put upon a board, the painter has, it is clear, to draw upon his imagination "some"—as he would put it. That being so, it is hardly surprising if the name, done into American, turns out to be a more or less grotesque collection of syllables. This, be it understood, is only a theory of my own, but it appears to me to be about the only theory which fits the facts.

Accompanied by my friend, I explored the principal streets in Chinatown on a Saturday night. We had been referred to a particular house in Washington Street, where a newspaper in the Chinese language is regularly published, to find a guide and interpreter; but we discovered that the entrance to the establishment was through a long and perfectly dark passage of most forbidding appearance, where Chinamen were constantly passing to and fro in the gloom. We concluded that if the kind of person we sought were only to be got by groping one's way up that passage, we would manage to do without him, for it seemed impossible to us that either guide or interpreter could be more sorely needed in any part of Chinatown than in that particular expedition. In short, we wanted a guide and interpreter in order to find a guide and interpreter. We puzzled our heads over this curious practical riddle for some time, and then "gave it up," and decided to be content to see as much of the Chinese quarter as we could explore alone.

I am disposed now to regret this decision, because I have discovered that some of the most interesting features of the district can only be found and understood by the assistance of an interpreter who knows the place. Among these are the theatres, opium dens, and joss houses, all of which a stranger ought to see if he would fully understand the Chinese. The theatres are very curious, but to the European visitor the plays presented are of no earthly interest. Some authorities say that the dramas are of the most astounding length. Instead of being got through in a night, as ours are, a play lasts for weeks, if not months; and a very monotonous business it must be to see one through, if the descriptions I have heard and read are trustworthy. The stage is of the simplest and rudest character, being merely a bare platform, without flies, wings, scenery, or any of the other elaborate machinery which makes the stage of a European theatre so complicated a contrivance. The "band" consists of six or seven barefooted and bare-legged men, who sit at the back of the stage, and extract the most hideous din, in which there is no trace of time or tune, from drums, cymbals, untuned fiddles, and other instruments for which there is no English name. Some of the plays appear to be of the character of opera, for the chief characters sing a good deal. Their singing is worthy of the orchestra, and it is impossible to say more. Women never appear on the stage; all female characters have, therefore, to be represented by the other sex. Some of the male performers are not only naked

as regards the legs and feet, but they are also stripped down to the waist. The performances are of the most grotesque and ridiculous character—that is, as viewed from our standpoint.

The joss-houses are the temples in which the Chinese find an outlet for such few religious ideas as they happen to possess. There are several of these temples, dedicated to various deities, but Mr. Marshall's description of one of them will suffice. He says:—

"The temple we were taken to was situated 'on' Dupont Street, or rather off that thoroughfare, for we had to grope our way along a dark narrow passage which led out of it, then pass into a small square full of Celestials living in dirty higgledy-piggledy, apple-pie fashion; and then we had to ascend the outside of a house by several rickety flights of stairs, to a room on the third story. This joss-house was dedicated to Kwan Tai, the god of war, and consisted of two rooms, one a little larger than the other, both of them devoted to the worship of the Chinaman's popular gods. The door was fortunately open, and we entered; but we became immediately sensible of such an abominable odour that we were almost compelled to beat a hasty retreat. However, we aroused the keeper, who was sound asleep inside, in a corner near the doorway; and he lit a few lanterns for us, which threw a pale glimmer on the objects around. It was a singular, tawdry arrangement that we looked upon, a gaudy spectacle, grotesque in the extreme. Red and gold paper dragons, and ingeniously devised, hideous-looking birds and beasts, were pasted about the apartment, covering walls and ceiling. At one end of the room were the images of three of the more important deities, placed in separate little recesses or alcoves, and before each god a small red oil-lamp was depending, which, although burning, emitted little or no light. In the centre was the figure of Kwan Tai himself—a most hideous and frightful object. He had a face as red and shiny as a billiard ball. He wore an immense black beard reaching down below the waist; peacock's feathers stuck out from his head, and he was robed in scarlet and gold. The expression of his countenance was terrific. The Chinese hold this particular deity in the greatest reverence and esteem, and claim a correlative feeling of regard on the part of the deity himself. 'Chinaman he likee him heap muchee,' says John, 'and he likee Chinaman heap muchee too.' At the feet of Kwan Tai were placed three little cups of tea, in case he should get thirsty and want to take a drink. On the right of this deity was a figure of the god of finance; on his left was the god of pills—the medicine god, whose name is Wah Tah. He held a pill in his left hand. The walls of this room were decorated with battle-axes, spears, and shields, all brought over from China. There was a bell and a drum suspended just inside the doorway. These are used for wakening up the gods when they get sleepy, and do not properly respond to the invocations of the worshippers. Besides the gods already mentioned, there was, in this room, a figure of Ham Nai Hung Shing Tai, the god of fire. The colour of his complexion did not belie his name. In the centre of the room was a very interesting and valuable curiosity, namely, a large iron-framed glass cabinet, covered over with wire, containing hundreds of grotesque little gold-gilt carved, wooden figures representing Chinese men of mark, such as great historical personages, heroes, warriors, etc., from the earliest ages down to recent times. Many of the figures represented mythology as well. The Chinese attach the utmost importance and value to this collection. It had been brought hither from Peking. Passing into the other or smaller room we found the images of three more deities, similarly posed in separate alcoves. First there was the Woman Warrior. She was red-faced, and looked very masculine. She had been given one cup of tea. On her left was a small figure of the Tiger Slayer, with a small tiger looking fierce by his side. On the right of the Woman Warrior was the Great Religious Woman, or Goddess of Mercy. She had been given three cups of tea. There was the image of a baby let into her forehead. In a corner of the room was a figure of the Bad Joss, or Wicked Fellow, put out of sight as much as possible."

These temples, with their hideous deities, appear to indicate that the Chinese have fallen very far short of the enlightened teachings of their ancient sage, Confucius. The opium houses afford further and still more painful evidence of the same fact. In these dens, Chinamen lie for many hours and even whole days at a time, and inhale the fumes of opium—that noxious drug which, while it provides their imaginations with a temporary Paradise, destroys alike their mental energy, their power of will, and their moral fibre, and leaves them intellectual, physical, and moral wrecks. I have heard and read many descriptions of these loathsome places, but the subject is too painful to dwell upon in detail.

The streets of Chinatown on a Saturday night present a stirring scene. Streets and shops are alike full of Chinamen; scarcely a European is to be seen. Judging from what I saw, I should say the numerous barbers are among the most prosperous of the Chinese community. For the pigtail of the Chinaman is a fearful and wonderful thing, and, apparently, demands a vast deal of looking after. And the naked part of the head requires an equal amount of attention, for it has to be kept shaved perfectly clean. With the exception of the small circular patch at the back, from which the long plaited pig-tail springs, the head is kept so smoothly shaved as to present a blueish tinge. The barbers, moreover, carefully pick out every hair they can find in the ears, on the neck, and everywhere else except where the sacred pigtail is attached to the pate. Add to this a good deal of washing in a very deliberate manner, and it will be seen that the processes through which John Chinaman frequently goes at the hands of his barber are elaborate and protracted, and, I should say, expensive. The barbers' shops are to be counted by scores; sometimes three or four are found adjoining each other. Shops containing nothing but money are also pretty numerous. These appear to be banks, but the business is not conducted in the fashion which finds favour in Threadneedle Street. The whole of the funds of these establishments appears to be displayed in the window—notes, gold, and silver alike. Now and then, a Chinaman will be seen to enter, and either to receive or pay in a small sum; and the banker or clerk behind the counter forthwith makes in a book a few of those "cat's-cradle"-like puzzles which are to be seen upon tea-chests. This he does very deftly, using for writing tool a sort of cross between a pen and a brush, and working from the right side of his page towards the left. This system of writing "backwards" as we describe it, appears to be the key to everything Chinese. Looked at from our point of view, it is all upside-down, or inside-out, or hind-side-before. But then it is their "way," and was probably their "way" when our predecessors in the occupation of these islands painted their skins, and perhaps had each other for dinner. Whether the Chinese will ever abandon their form of civilization for ours is, at this moment, a question of great practical interest. Their neighbours, the Japanese, have made the change with almost too startling a suddenness. Hitherto, the ruling classes in China have resisted all change, and have done their best to keep from their people all knowledge of European science and customs. But we are now told that the most populous and conservative of all empires is at last showing signs of yielding to the influence of Western ideas, and that, for good or evil, it is about to be "opened up to civilization." Let us hope that that "civil-

ization" will take a better and nobler form than it has sometimes assumed under similar circumstances! If it does not, the Chinese can hardly be expected to admit that the new European article is in any way superior to their own.

A TROTTING MATCH.

"LET US GO TO THE RACES, FOR TO-MORROW WE DIE."

I had an opportunity, while at San Francisco, of witnessing one of the great trotting matches which are so exceedingly popular throughout the States. The race-ground is on the western side of the city, between the cemeteries and the seashore, in the midst of a desolate region where sand is king. The course, which forms an immense oval, is so jealously fenced in through its whole extent by a high wooden barrier, that it is almost impossible for anyone to get the slightest glimpse of the interior except by payment of the inevitable dollar for admission. The interior presented a remarkable contrast to an English race-course. There were, it is true, some raised, covered galleries for the convenience of lookers-on; but there was no crowding, no drinking, no black-guardism, and very little visible betting. Fancy a race-course without liquor! This was actually the state of things I found, so far as outward appearances could be trusted. There must, I suppose, have been something to drink stowed away somewhere out of sight, which those who "knew the ropes" knew where to find; but certain it is that there were no drinking booths ostentatiously displaying their wares, and offering temptation to every passer-by. Whatever was drunk—if, indeed, anything was—was consumed secretly in some secluded spot which I failed to discover. I saw not a single drunken man, and only one (of whom I shall speak presently) who appeared to be in the slightest degree the worse for liquor.

The only gambling going on was of a very mild kind. It consisted of betting small sums on the vagaries of a sort of wheel of fortune. The gambler placed his coin on a particular colour on a rainbow-like table. A nigger attendant gave a spin to the wheel, which was also a sort of revolving rainbow. If the wheel stopped at a particular point, the gambler won; if it stopped anywhere else, the owner of the concern took the stakes. As far as one could see, the chances of the owner and of his patrons were about equal; but somehow or other—how I failed to discover—the former contrived to win in the majority of cases, and his piles of dollars grew in height regularly, if not very rapidly. When business grew slack, he commended his game to the attention of the crowd in a set oration from a throat of brass. This game, he assured his hearers—with a view, I suppose, to the cosmopolitan nature of his audience—was adapted to people of every clime, every colour, and every creed. Though his countenance was unmoved, there was clearly a touch of humour in that reference to the religion of his possible patrons. It was, moreover, a guarantee of impartiality and the broadest toleration. He had no more objection to the dollars of a Buddhist Chinaman or a Pagan Indian, than to the money of a Methodist Negro, a Mexican Catholic, or a native American Protestant—and there were no doubt representatives of each on the course that day.

To an Englishman, who is accustomed to regard a diminutive jockey astride a horse as the typical element of a race, an American trotting-match is an irresistibly comic performance. The rider sits upon a tiny perch about the size of a dinner plate, and this perch is supported in the lightest possible manner upon a pair of

the lightest possible wheels. The whole concern is so airy that a fairly strong man can lift it bodily with one hand. The perch is close to the horse's tail; and the driver, resting one foot on each shaft, takes the hind-quarters of the animal fairly between his legs. Horse and man appear, indeed, to form one creature, so inextricably are they mixed up.

I am not aware that the races I saw were of special importance or interest. All I remember about it is that the fastest horse contrived to cover the mile in 2 minutes and 20 odd seconds, never breaking out of a trot. This appeared to me marvellous work; but second by second the "record" has since been pulled down, until, about a month ago, a wonderful mare belonging to Mr. Bonner, a New York newspaper proprietor, trotted a mile in a little over 2 minutes 5 seconds.

What struck me as the most remarkable feature of this race-meeting was the entire absence of excitement. Almost everybody regarded the results as calmly as I did; and as I had nothing "on" either horse, and indeed did not know one horse from another, I need hardly say that I was perfectly unmoved. An old nigger, a good deal the worse for wear both in person and clothes, and who clearly had found some liquor somewhere, was standing close to me while one or two of the races were being run, and he was highly indignant at the coolness of the spectators. I remarked to him that nobody appeared to be moved much at the results—that, in fact, there was no excitement whatever. He expressed his agreement with a sigh, and assured me that, if I wanted to see the right sort of races and the right sort of excitement, I must go down to New Orleans, where he was "raised." Remarking that there were plenty of rich men in San Francisco, I asked him how it was they took apparently so little interest in the great national sport. At the mention of his rich fellow-citizens, the old nigger's indignation rose rapidly towards boiling point. "Yah!" he said, "they don't care about nothin' but money—money—money. They don't git no enjoyment—won't even come out to a trottin' match. And only think," he added, in a subdued tone, partaking of sadness and pity, "*to-morrow they may die!*" This burst of Epicurean philosophy from a shabby and slightly "drinky" old negro was certainly about the last thing I had expected to find on that race-course; and I could not help wondering whether the poor old fellow was aware that he was simply paraphrasing the motto of a very ancient school of philosophers when he said (in effect): "Let us go to the races, for to-morrow we die." That men worth millions should be content to run the risk of dying to-morrow without having first seen the trotting to-day was to him a thing incomprehensible. And he went on to point his moral by a reference to his own better example. "Look at me!" he said, "I've got to work hard for my bread, but I *will* enjoy myself for a day; and I don't care if my liquor to-day *do* cost me two bits." I regret to have to add that an hour or two later, as I rode into the city, I saw a tram-car conductor refuse to allow that disciple of Epicurus to enter his conveyance; and the car-driver was justified in what he did, for the nigger, having perhaps spent the balance of his "two bits," had got considerably beyond the slightly "drinky" stage, and was disposed to press his philosophy energetically, not to say offensively, on every passer-by.

My readers are probably wondering what I mean by "two bits." The "bit" was an old Spanish coin which circulated in the Far West before the dollar and

the stars and stripes had penetrated beyond the Rocky Mountains. Two "bits" were about equal to 25 cents, or a quarter dollar; and, although the "bit" has long since disappeared, the Californians are still in the habit of calling the quarter "two bits." The custom is a rather absurd one: for, as I have said, the "bit," as a coin, no longer exists. Moreover, even as a mode of reckoning, one never hears of "one bit" (or 12½ cents), for the simple reason that California recognises no amount below five cents, and there is no such coin as a half-cent in any part of the Union.

THE COREAN EMBASSY.

While we were in San Francisco, an embassy from Corea, the small state comprising the peninsula which almost encloses the Yellow Sea, on the coast of China, arrived at the Palace Hotel, and for several days they were our fellow-guests. The Ambassador was attended by two or three of his own countrymen, and by two gentlemen, presumably interpreters, in European dress. The dresses of the Coreans themselves were very rich in quality and very splendid as to colour; but, viewed by a devotee of dress suits and stove-pipe hats, they were wildly eccentric in cut. But the head-gear was the most striking part of the costume. The hat was a tall, steeple-like arrangement, something like that which the country women of some parts of Wales still wear. The hat was held on by a strong metal chain under the chin, like that which secures a life-guard'sman's helmet. These hats were never taken off in public. The Coreans took all their meals in them, and may have slept in them too for what I know. San Francisco is pretty well accustomed to curious and varying costumes, but the dresses of these people excited great interest even in that cosmopolitan city, and the Coreans were followed by a small and amused crowd wherever they went, just as they were some months later in London. We met with them again later on at New York, and there, again, they stayed at the same hotel as we did. The business of the Embassy, we afterwards learnt, was to secure commercial treaties with America, Great Britain, and some other countries.

THE RESOURCES OF CALIFORNIA.

I have hitherto said little of the State of California at large, although I have devoted a good deal of space to its great commercial capital. But my task would be incomplete if I failed to notice, however briefly, the country itself and its great natural resources.

California is, with one exception, the largest State in the Union. Texas alone exceeds it. The area of Texas is about 274,000 square miles. California contains 188,000, and is, therefore, about equal in area to France. Its coast line is 1,100 miles in length, and the State itself, measured in a straight line from north to south, 800 miles. The average width is about 200 miles. The population in 1880 was considerably less than a million. If it were inhabited as thickly as Great Britain, it would possess a population of over sixty millions. There is, therefore, plenty of elbow-room yet.

As everybody knows, California owes its position as a civilized and wealthy State, in the first instance, to its vast stores of mineral wealth, which first became known to the world in 1848. While the wild rush to the diggings lasted, few thought of looking for any other kind of wealth than that which was yielded by the *m. as.* But when the excitement due to the gold discoveries had died away, and men found time to look about them,

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it began to dawn upon the world that California possessed riches of a far more solid value and inexhaustible character than even her far-famed mines. It was discovered that she possessed a soil and a climate adapted to the growth, in luxurious abundance, of almost every conceivable kind of agricultural and horticultural produce. California is, indeed, a Golden State in more senses than one. Its fields, its orchards, its vineyards, its orange groves, are as truly "golden" as its stores of the precious metal. It is still a great mining State, but its mining interests, as compared with those of its agriculture, are year by year declining.

There is apparently no kind of corn or fruit, from barley to oranges, which cannot be grown to advantage in some part or other of this great State. Orange-growing is, of course, confined to the south, but immense vineyards are found in the north. The luxuriousness of the growth of corn and fruit almost surpasses belief. A gentleman connected with the two great railways of California (the Central Pacific and the Southern Pacific) has under his care a complete museum of specimens of produce of all kinds, designed, of course, to illustrate the wonderful fertility of the State. I spent an hour or two with him in this building, and was fairly amazed at the abnormal size of the fruits, and the wonderful productiveness of the corn, some of the stalks of which, standing on the floor, touched the ceiling of the room.

As a wheat-growing State, California has probably no rival in the world. She already grows between, 30,000,000 and 40,000,000 bushels of wheat annually, and three years ago her exports of this one article reached the value of seven millions sterling. In spite of the vast distance of San Francisco from Europe by sea, Californian wheat reaches this country by the mill on bu-hels, and competes successfully with that which comes from the more eastern prairie States by way of the lakes or the canals. But wheat, though the principal product of Californian agriculture, is by no means the only one. The clip of wool is now between thirty and forty millions of pounds weight. The cultivation of the vine is yet in its infancy, but the export of wine in 1882 reached three millions of gallons. Hops, dairy goods, olive oil, dried fruits, oranges, and honey are among the other produce of the country. Perhaps, on the whole, the fruit of California is its most remarkable vegetable product. The variety is very great, and the abundance of the crops amazing. The Californians admit that Florida beats them in fruit, but maintain that in wheat no other State in the whole Union can compete with theirs on equal terms.

From an agricultural point of view, the one great drawback is the irregularity of the rainfall, and the consequent danger of drought. The wet weather and the dry seasons occur with perfect regularity, but the quantity of moisture which falls during the wet season is sometimes, in the neighbourhood of San Francisco, as little as 7½ inches and at other times as much as 35 inches. It must not be supposed that drought is so regular and serious a trouble as it is in the arid regions further east, already referred to; but that it is an evil with which the agricultural settler in many parts of California has to reckon is beyond doubt.

The rainfall would, no doubt, prove to be ample for all agricultural purposes, if it were only equally spread over the whole year and over the whole State. But there is an excess in certain localities (especially among the mountains) and in certain seasons; while in other districts and in other parts of the year there is a deficiency. This evil is being partially remedied by irrigation, as in Colorado. The streams flowing from the

snow-clad mountains are intercepted at high levels, and their water is let into a network of artificial canals, which carry certain fertility wherever they flow. Irrigation by means of these canals is as yet in its infancy. Only a small part of the water which flows from the mountains is yet turned to account, but there cannot be a doubt that the system is susceptible of almost indefinite extension, and that thousands of square miles which are more or less subject to drought may be rendered permanently independent of the irregular rainfall of the valleys.

Another mode of irrigation is by means of artesian wells. When speaking of Denver, I described what a boon these inexhaustible supplies of pure water had proved to that city and to the State of Colorado at large. But in this matter California has outstripped Colorado, for it boasts of possessing more artesian wells, in proportion to population, than any other country in the world. And this boast is probably well founded. There are thousands of these wells, and the number is rapidly increasing. Over a large part of the country it is only necessary to bore deep enough to secure a never-failing supply of water, which either overflows, or rises so near to the surface that an inexpensive windmill easily brings it to the top. I was told that a whole farm of 200 or 300 acres could, in some instances, be effectively irrigated by means of a single well. If these wells can be bored anywhere, and if they prove to be as inexhaustible as they appear to be, it is obvious that the great irrigation question is virtually solved. There ought to be no danger of serious loss by drought in a country where the subterranean supplies of moisture are so easily tapped.

California is being rapidly supplied with the means of communication, not only between its own component parts, but also with the States and Territories to the North, the East, and the South. The mileage of railways proportionately to population is already very large. The principal lines are the Central Pacific and the Southern Pacific, both belonging to the same Company. Of the Central Pacific, whose main line connects California with all the Eastern States, I have already written pretty fully; and I regret that time did not allow me to accept a courteous invitation from the railway authorities to take a run over the Southern Pacific to Los Angeles, the centre of the orange-growing district of Southern California, 482 miles from San Francisco. There is some wonderful engineering on this line. A range of mountains near Los Angeles is surmounted by means of loops somewhat similar to those on the Clear Creek Canon Line, near Georgetown, Colorado. The railway doubles upon itself four times, so that within a short distance there are five apparently distinct tracks almost parallel to each other. At one point the line crosses over itself, the lower loop being in a tunnel and the upper one at the surface. Crossing the Colorado Desert, somewhat farther south, the railway is for 60 miles below the sea level. The country is at that point greatly depressed, the greatest depth reached being 266 feet. If water were let into this region, a considerable lake would be formed, which could not possibly discharge itself into the sea until it reached a great depth.

The principal object of railway extension towards the South is to supply direct communication with New Orleans and alternative routes to the Eastern States. A glance at the map will show the importance of the connection with New Orleans. The sea voyage from San Francisco to Europe, round Cape Horn, is of enormous length. It is, indeed, about the longest which it is possible to make between port and port. The aim of the Southern Pacific Railroad Company is to make

New Orleans, for the purposes of European trade, the port of California, and to render unnecessary the long voyage round the Horn. Nay, they have obtained control of a through route from New Orleans to New York, and propose to compete with the more direct lines for the through traffic between the Atlantic and Pacific seaboard. Fast steamers are, it is said, to be put on between Liverpool and New Orleans, and passengers and goods from Europe for California may thus avoid New York altogether. The advantages held out are—a voyage which, though somewhat longer than that to New York, is by a warmer and less stormy route, and afterwards a much shorter railway journey. The scheme is a bold one, and one in which vast issues are involved; but the men who constructed the most difficult section of the original Pacific Railroad are not the persons to be deterred by trifles. They have the command of unlimited millions of capital, and their enterprise and determination are proverbial. They are, doubtless, pursuing these grand schemes in their own personal interests; but, whether they serve their own ends or not, they cannot fail to benefit the public by increasing the competition for the ever-increasing tide of transcontinental traffic.

I have now done with California, and, indeed, with America, for the present. The great cities of the East, in which I spent the last month of my sojourn in the States, are tolerably familiar to English readers. A hundred Europeans visit them for every one who penetrates, as I did, the Far West. It is for that reason that I have dealt so fully with the Western States. Were I to describe with equal fulness the cities I visited during the last three weeks of September and the first two weeks of October, my story would now be only about half told. But it has already run out to a far greater length than I anticipated, and I must now bring it to a close.

I have already described (somewhat out of the proper place) my return from San Francisco to Denver, and my deviation from the direct route to view the wonders of the Toltce Gorge, on the borders of Colorado and New Mexico. From Denver I made my way to Kansas City—a 24 hours' run—by the Kansas Pacific section of the Union Pacific Railroad, which passes through the whole length of the great State of Kansas. Arriving at Kansas City (which, by the way, is in Missouri and not in Kansas) just in time to catch the night train to St. Louis, I at once set off for that city, and there rejoined my travelling companion, who had preceded me by two days. St. Louis alone would supply materials for a long chapter; but all I can say about it here is that it is a city as large as Birmingham, busy, dirty, and wealthy, with an immense trade, and situated on the bank of the Mississippi, a short distance below the junction of that stream with the Missouri.

It was on the 13th of September that we left St. Louis for the somewhat similar but rather less populous city of Cincinnati, the commercial capital of Ohio, on the Ohio River. Here, again, there is much worth seeing and describing. The natural position of the place is as irregular and picturesque as that of Bristol, but an ever-present cloud of smoke from the numberless factories, railway locomotives, and steamboats renders it impossible to obtain anything like a complete view. While at Cincinnati, I deviated from my eastward route to spend a day with an old Bridport friend, who had recently transferred his large family from the town which elected Mr. Warton to the flourishing and pleasant little city of Richmond, Indiana. It was a very pleasant change to find oneself warmly welcomed into a circle of well-known faces.

From Cincinnati to Washington, a journey of twenty hours, we travelled by the Baltimore and Ohio Rail-

road, which crosses the Alleghany Mountains amid wooded scenery of exquisite beauty. We devoted two days to the Federal capital, two to Baltimore, and two to Philadelphia, and on the 22nd of September we found ourselves for the first time in New York. Six days later, we went on to Boston, and, having spent a very pleasant afternoon with Mr. Howells, the popular novelist, with whom we had crossed from Liverpool in the *Parisian*, we proceeded to pay a short visit to another gentleman whose acquaintance we had made on board the same steamer—viz., Mr. Dingley, a newspaper proprietor at Lewiston, in the State of Maine. Mr. Dingley and his good wife gave us a right hearty welcome, and showed us all the lions of Lewiston and its twin city Auburn. All I can say of these places is that their prosperity, which is very remarkable, is due to a fall on the Androscoggin River, which supplies power to eight or ten large cotton and other factories. Leaving our kind hosts with regret, we turned back to Boston, and, after a day or two spent in exploring the "Hub of the Universe" as Bostonians are said (on the authority of other Americans) to call their famous and interesting city, we turned 300 miles westwards to see the glove-manufacturing towns of Johnstown and Gloversville (State of New York). Here we found scores of glovers (masters and journeymen) hailing from Yeovil and Milborne Port, and it was a rather strange experience to find oneself, so far from home, in the midst of a colony of neighbours and to receive their kindly greetings turn where one would.

From Gloversville we returned by rail to Albany, the capital of the State of New York, where a marble State Capitol of vast dimensions is slowly raising its gigantic form above the city at an almost fabulous cost. From Albany we, of course, went down to New York by steamer on the Hudson. I say "of course," because no stranger would dream of going by any other route. What is our verdict as to the Hudson? Well, it is a much larger river than the Rhine, but those who say it is more picturesque than the latter river, between Bonn and Bingen, have different notions of the picturesque from mine. The run down the Hudson is, nevertheless, a delightful trip, which no visitor to New York ought to miss.

From October 6th to October 11th we spent in New York, and I regret being unable to say something about that world-famed city. But what I would like to say would of itself fill a volume of fair dimensions, and already the name of the books descriptive of the Empire City is Legion. I must not add to their number, even if the limits of time and space did not forbid—as, in view of a general election, they do.

On the 14th of October, my friend and I committed ourselves to the tender mercies of the White Star Steamship Company. In their good ship *Germanic* we sailed for home, and on the 23rd we stepped ashore at Liverpool, after a run which, though not altogether devoid of unpleasantness, was a very fair one for the third week in October. The *Germanic*, although a giant of 5,000 tons, is a rather small steamer beside the new monsters of the Cunard and one or two other lines; but she is a splendid sea boat, and her commander (Capt. Kennedy) is one of the ablest, coolest, and most trusted of Atlantic skippers, though his best friends will hardly contend that he is the most amiable and approachable of men.

Having thus briefly and hurriedly traced my progress back from the Colorado plains to the quays of Liverpool, my long and often interrupted task is at last done. If I have succeeded in conveying anything like a correct impression of the Greater Britain beyond the seas to the minds of my readers, that task will not have been undertaken in vain.

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